Version 11.0	Raster Image Printer
	User Guide

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Welcome to Raster Image Printer

Thank you for choosing Raster Image Printer 11.0.

The Raster Image Printer is installed on your computer in the same manner as a hardware printer that creates paper copies. Raster Image Printer is based on the Microsoft® universal printer core, which is included with Windows. This ensures that Raster Image Printer will work with any Windows application that provides a print function.

Printing to the Raster Image Printer is the same as printing to any other printer driver. The difference is that Raster Image Printer creates serialized and multi-page images or PDF files and stores them on your computer instead of creating a paper copy. Raster Image Printer can create the following types of files:

- non-searchable Adobe® PDF files, serialized or multi-paged
- TIFF images, serialized or multi-paged
- JPEG (*.jpg) images
- CompuServe PNG images
- CompuServe GIF images
- Windows BMP images
- Adobe® PhotoShop 3.0 PSD files
- TARGA (*.tga) images
- ZSoft DCX (*.dcx) images
- ZSoft PCX (*.pcx) images
- CALS Type 1 (*.cal) images

This makes Raster Image Printer ideal for document imaging and electronic document delivery because you do not have to first print and scan hard copies. It also allows you to distribute your documents on a truly universal scale; virtually any imaging program, document management solution, or fax file viewer can read at least one of the file formats that can be created.

Legal Notices

Raster Image Printer 11.0

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PEERNET Inc.
18 Deakin Street
Suite 208
Ottawa, Ontario
K2E 8B7

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System Requirements

Processing full color images places great demands on both the CPU and memory. The amount of memory required to process an image is directly proportional to both the dimensions (paper size) and the resolution (DPI, or **D**ots **P**er **I**nch) of the image. If either of the following driver settings are used, the amount of memory required to process the image will be considerably higher:

1. The *Watermark* option is enabled.

2. The *Color Reduction* option is set to Reduce to optimal palette and you are printing in color.

As an example of the amount of memory involved, consider a standard 8.5" X 11" document printed in color at 600 DPI. In order to perform any of the operations listed above, the entire image must first be loaded into memory. The calculation of the amount of memory required is:

memory required = (number of pixels in image) X (number of bytes per pixel)

The total number of pixels in an image is equal to the (width of the image X the horizontal resolution) X (height of the image X vertical resolution). Furthermore, each pixel in a full color image uses 3 bytes to store color information. Our calculation therefore expands to:

memory required = (8.5 X 600) X (11 X 600) X 3 = 100980000 bytes = 96.3Mb

No less than 96 megabytes of memory is required to hold the image in memory. If this much physical memory (RAM) is not available for the printing process, Windows will use virtual memory. The resultant I/O (reading/writing) operations to and from the hard disk significantly slows down the entire process.

Although there are no minimum requirements (except that virtual memory must be enabled) for using Raster Image Printer to process full color images, the following are the minimum requirements in order to achieve real-time processing of an 8.5" X 11" image in full color (no swapping to disk).

Resolution	RAM Required
600 DPI	256 megabytes
300 DPI	64 megabytes
200 DPI	32 megabytes

If you encounter heavy disk activity during the printing process, and find that the process as a whole takes an inordinately long time to complete, you can remedy the situation in any of the following ways (choose one):

1. Lower the resolution.

2. Print in black and white.

3. Disable all of the driver options listed above.

4. Decrease the paper size.

5. Add more RAM.

Typographic Conventions

Menu commands are displayed in **bold** text with a hyphen (-) separating the menu name and the command. For example, 'Click File − New' instructs you to select the *File* menu, then select the *New* command, while 'Click Edit − Paste' instructs you to select the *Edit* menu, the select the *Paste* command.

Terminology conventions

This guide uses terminology common to Windows applications. The following terms are used throughout the guide:

Term	Action / Description
Select	Highlight an item using the left mouse button or the appropriate keyboard commands.
Point	Position the mouse pointer so that its tip rests on what you want to point to on the screen.
Click	Point to an item with the mouse pointer, then press and immediately release the left mouse button without moving the mouse.
Right-click	Point to an item with the mouse pointer, then press and immediately release the right mouse button without moving the mouse.
Double-click	Point to an item with the mouse pointer then press the left mouse button twice in rapid succession without moving the mouse.
Drag	Point to an item with the mouse pointer, then press and hold the left mouse button while you move the mouse. When you have moved the item to its desired position, release the mouse button.

Typographic Conventions

Activating Raster Image Printer

Raster Image Printer is installed as a 30-day trial by default. When the install is complete, the Activation Status dialog is automatically displayed.

You do not need a serial number to evaluate Raster Image Printer. Click the button labeled *"I want to continue evaluating"* to activate the trial version of the product for 30 days.
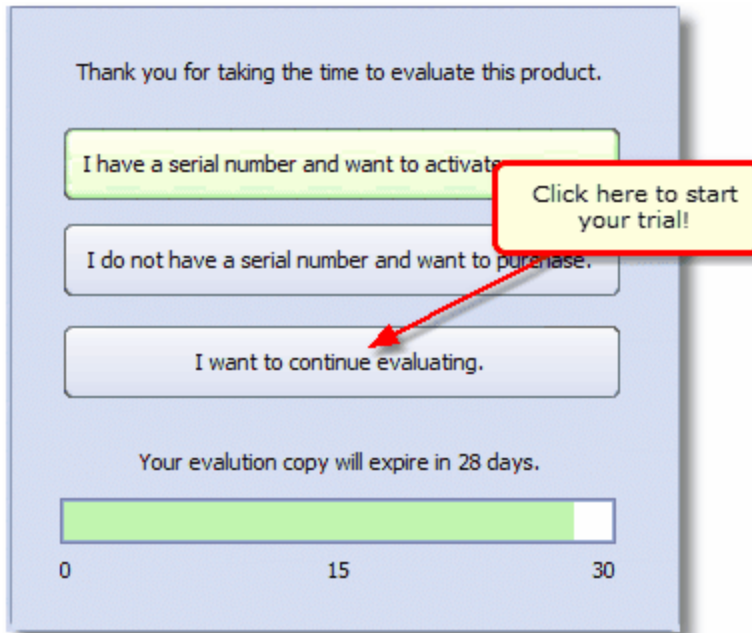
The progress bar at the bottom displays how many days you have left in your trial. While in evaluation mode, the Activation Status dialog is displayed every time you print.

At any point in your trial period, you can go directly to our on-line store by clicking the button labeled "*I do not have a serial number and want to purchase*" to purchase the product.

If you have purchased a copy of Raster Image Printer, you will receive a serial number as part of your order confirmation. Upon receipt of your serial number, follow the steps outlined starting with Launching the Activation Wizard to activate your product.

Launching the Activation Status Dialog

The Activation Status dialog is used to display your current license status.

If you are running Windows 10 or Windows Server 10

To launch the Activation Status dialog, select All Programs - Raster Image Printer 11.0 - License... from the Windows Start menu.
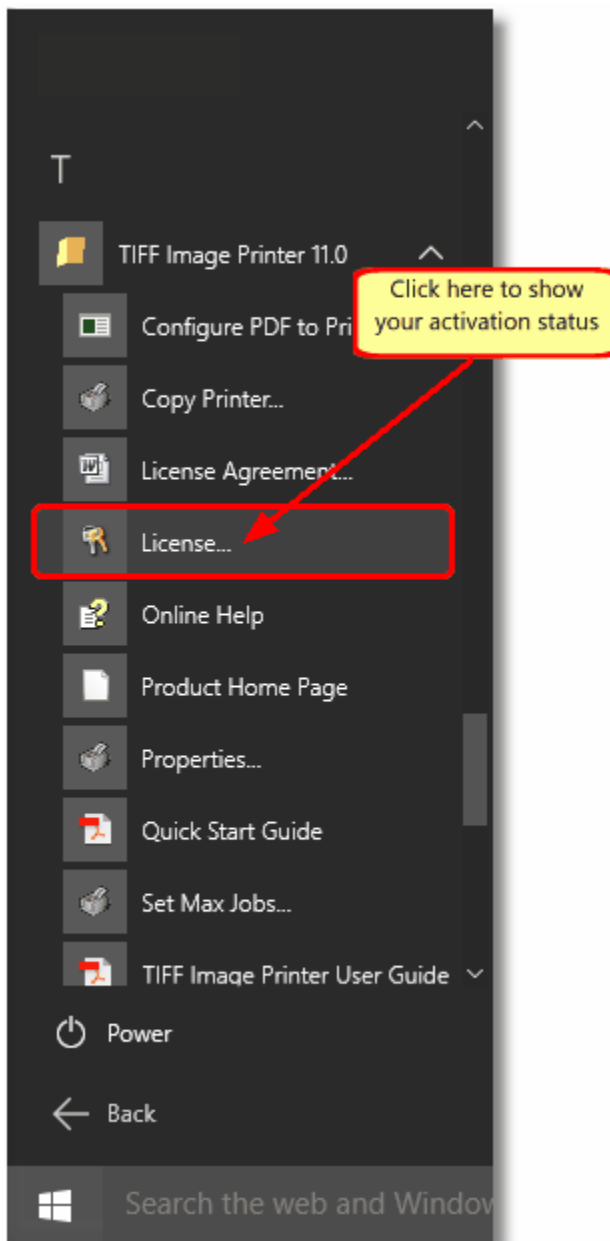
If you are running Windows 7 or Windows Server 2008 R2

To launch the Activation Status dialog, select All Programs - Raster Image Printer 11.0 - License... from the Windows Start menu.
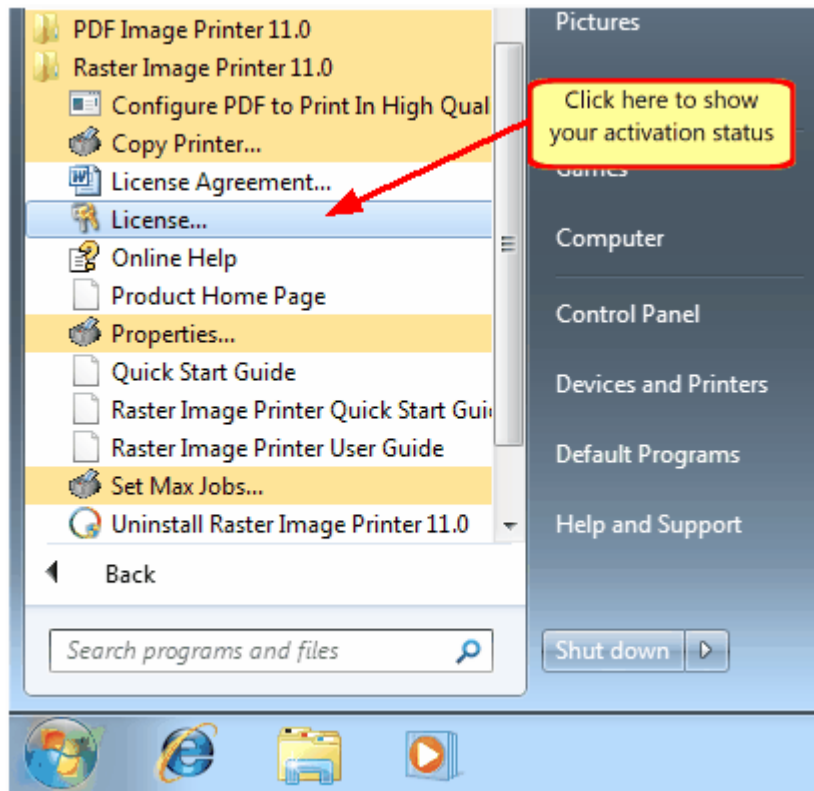
If you are running Windows Vista or Windows Server 2008

To launch the Activation Status dialog, select All Programs - Raster Image Printer 11.0 - License... from the Windows Start menu.
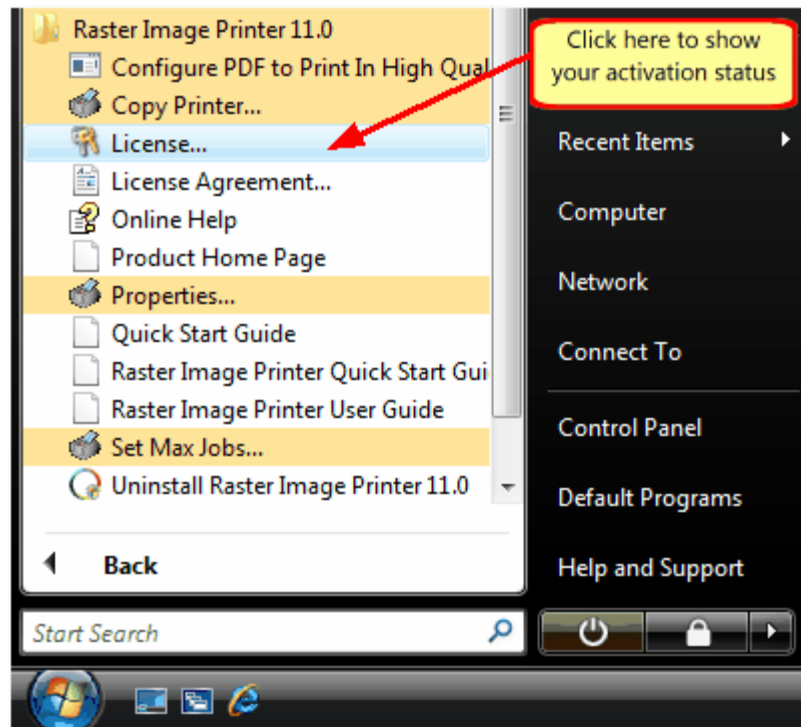
Starting the Activation Process

The Activation Status dialog displays different options when your trial period has expired than when you are still in trial mode.

If you have time remaining in your trial...

If you still have time remaining in your trial period, you can

- choose to activate the product with your purchased serial number

- go to our on-line store to purchase the product

- continue to evaluate the product

To begin the activation process now, select the *"I have a serial number and want to activate my copy"* button. This will launch the Activation Wizard, which will guide you step-by-step through the activation process.

- **I have a serial number and want to activate my copy -** Select this option if you have your serial number and want to activate your product. When the product is activated, the evaluation watermark is no longer placed on created files.

- **I do not have a serial number and want to purchase -** Selecting this option will take you to our on-line store where the product can be purchased. Once purchased, an order confirmation notification containing your serial number will be sent to you by email.

- **I want to continue evaluating -** Selecting this option allows you to evaluate the product. An evaluation watermark will be placed on all files created.

If your trial period has expired...

If your trial period has expired, you can only activate the product with your purchased serial number or go to our on-line store to purchase the product.

To begin the activation process now, select the *"I have a serial number and want to activate my copy"* button. This will launch the Activation Wizard, which will guide you step-by-step through the activation process.

- **I have a serial number and want to activate my copy -** Select this option if you have your serial number and want to activate your product. When the product is activated, the evaluation watermark is no longer placed on created files.

- **I do not have a serial number and want to purchase -** Selecting this option will take you to our on-line store where the product can be purchased. Once purchased, an order confirmation notification containing your serial number will be sent to you by email.

Entering Your Serial Number

To activate your product you need to enter in the serial number that was included with your order confirmation email. You can also find your serial number in your on-line store account.

Enter the serial number into the box on the screen. If you copy your entire serial number from your email and then return to this dialog it will automatically be filled in to the box.

> 💡 **Entering Serial Numbers:**
> The serial number is case sensitive and it is important to type the serial number exactly as it is received. Be sure not to leave any spaces before or after the serial number when typing or pasting, and note that the serial number ends with a series of hexadecimal characters (0-9,A-F).

Activating without an internet connection

If you are having difficulty connecting to the internet, or do not want to activate over the internet, you can choose to manually activate the product by clicking the *I do not have an internet connection and will activate manually* check box on this screen.

Manual activation does not require an Internet connection on the computer the software is installed on, but it does require that you have the ability to email an encrypted file to us to authenticate.

We will return the authenticated file to you, which you then import using the Activation Wizard to complete the activation process. These files are processed by PEERNET's technical staff from 09h00 to 17h00, Monday to Friday, Eastern Standard Time.

When activating over the internet, the Activation Wizard will attempt to validate an internet connection, and will prompt with the choice to manually activate it if it cannot connect.

Click the Cancel button to begin the manual activation process, or the Retry button to try connecting to the internet again.

Authentication Server could not be contacted from this machine.

Please connect to the Internet and press Retry to try again.

Press CANCEL to obtain a license using an email process.

Click Cancel to activate manully or Retry to try connecting to the internet again.

Retry   Cancel
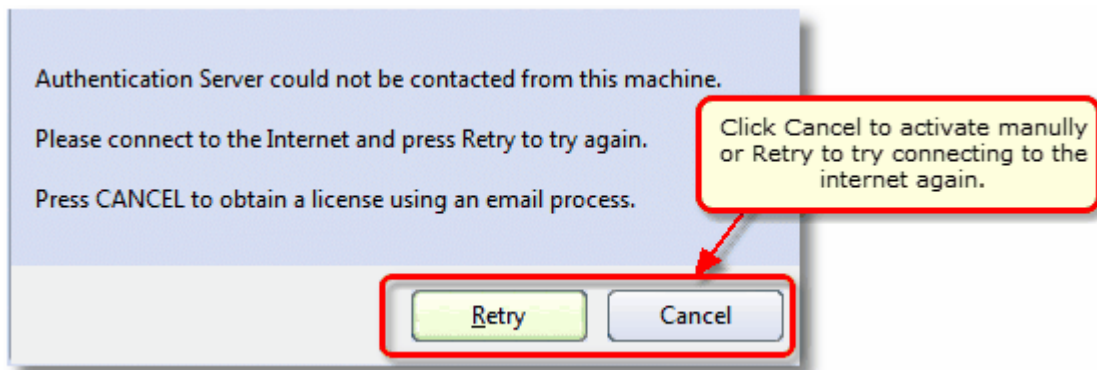
Note:
If you suspect your firewall or anti-virus software has blocked the connection, adjust your firewall or anti-virus software and click the **Retry** button.

Entering Your User Information

The next screen asks for your contact information. If possible, your *Name* and *Organization* information is automatically picked up from your system settings. The information in these fields can be changed if required.

> 💡 **Customer Privacy:**
> You cannot continue if either the *Name* or the *Email Address* field is left blank. Email addresses entered here are only used by PEERNET to notify you of updates to your product or other products that may interest you. We will never rent or sell our customer's and client's information to third parties.

Validating Your Information

This screen summarizes the information entered in the previous screens. The Back button can be used to return to the previous screens and change any information if needed.

If you are activating your product over the internet

If you are activation over the internet, skip the next section and go to Activation status results.

If you are activating manually (no internet connection)

If you are using manual activation, you will be taken to the manual activation export screen.

Manually Activating Raster Image Printer

In most cases, you will not have to activate your product manually. This only happens when Raster Image Printer is installed on a computer that has no access to the internet, or the computer is configured such that the user cannot access the internet. This can also happen if a firewall program or anti-virus software blocks our attempt to connect with our license server.

If you do have to activate manually, you will need to follow the steps below.

1. Use the Activation Wizard to create the encrypted file, **PNProdID.txt**.

2. Email the file to peernet@peernet.com to be activated. For computers with no email capability, you can save the file to a shared network drive, or use an external storage device such as a USB flash drive (also known as thumb drives), or a MicroSD storage card to copy the file to a computer with email capabilities.

3. A file named **PNProdAU.txt** will be emailed back to you. Copy this file back to the computer where Raster Image Printer is installed and restart the Activation Wizard to complete the license activation.

Exporting the PNProdID.txt file

To create the file click the *"Create the PNProdID.txt product identification file"* button in the middle of the screen.
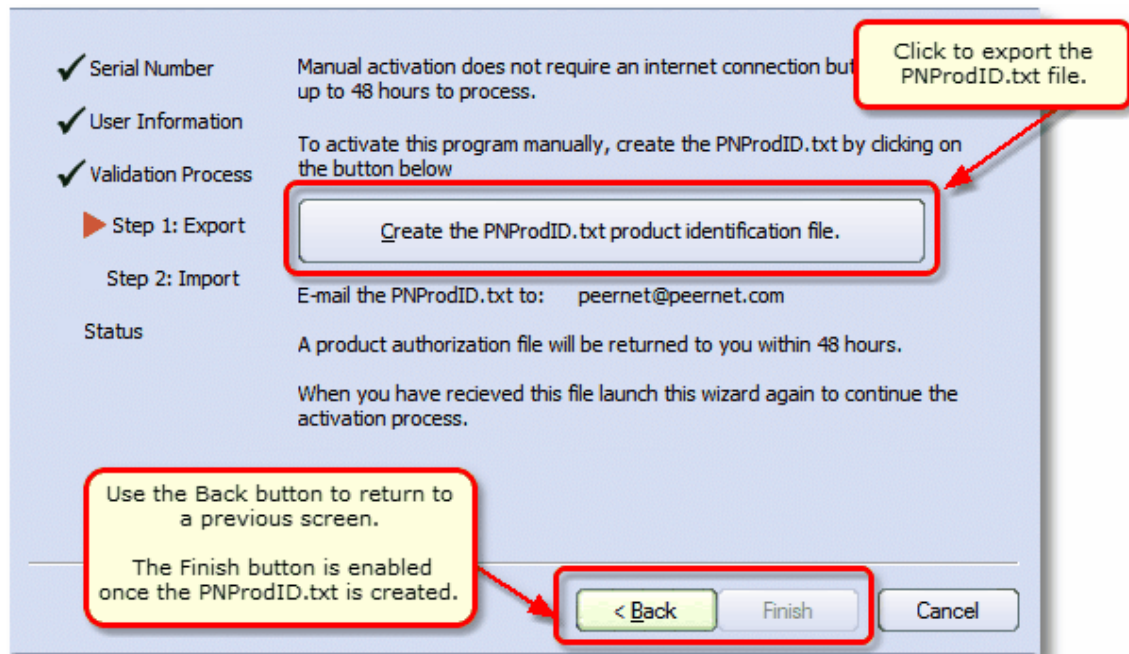
A save dialog box will appear prompting you to choose where to save the **PNProdID.txt** product identification file. This dialog may look slightly different depending on which version of Windows you are running. Save this file in an easy to remember location, like your Desktop or your Documents folder.
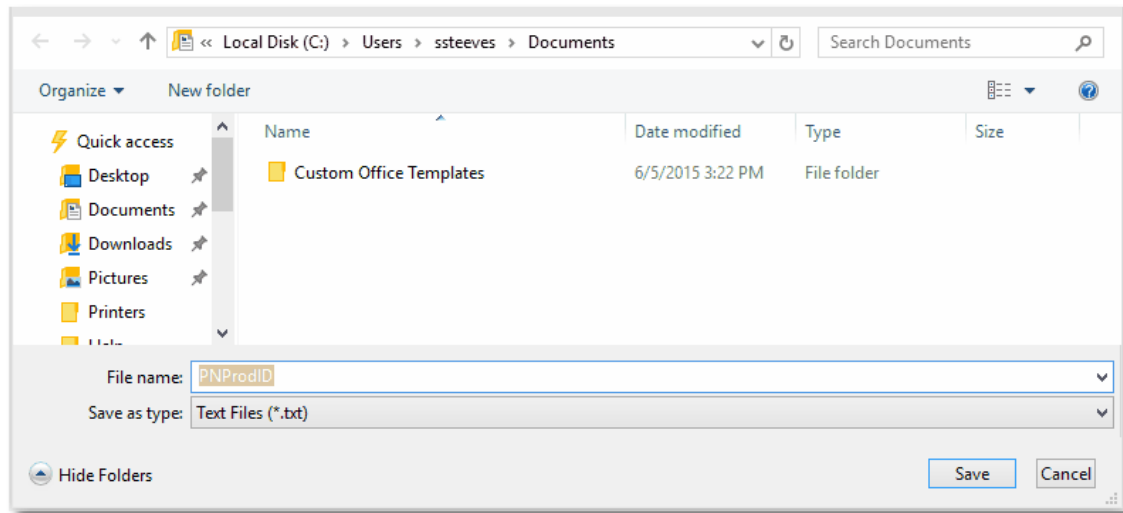
You need to email this file to peernet@peernet.com. For computers with no email capability, you can save the file to a shared network drive, or use an external storage device such as a USB flash drive or a MicroSD storage card to copy the file to another computer.

Importing the PNProdAU.txt file

When you have received the product authentication file **PNProdAU.txt** from PEERNET Inc., you will need save the file in an easy to remember location, like your Desktop or your Documents folder. If you need to move the authentication file back to the computer where Raster Image Printer is installed, do so now.

On the computer where Raster Image Printer is installed, restart the Activation Wizard by following the steps outlined in Launching the Activation Status dialog. The Activation Wizard will automatically start at the import screen.

Press the *"Import the PNProdAU.txt product authentication file"* button in the middle of the screen.
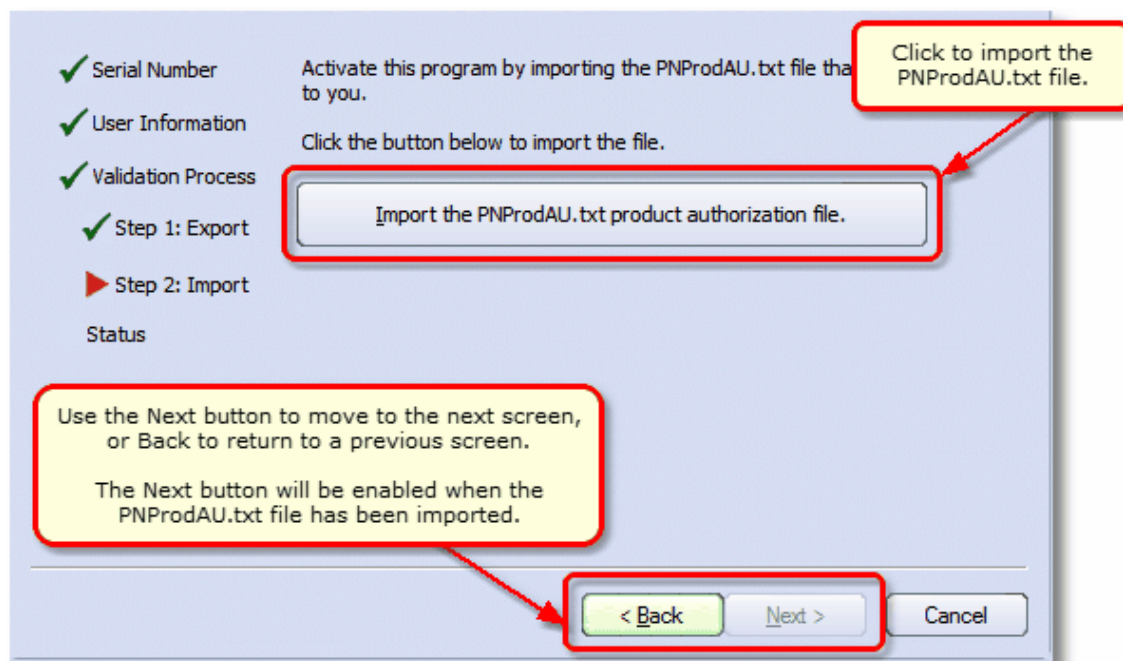
A browse dialog box will appear. This dialog may look slightly different depending on which version of Windows you are running. Locate where you saved the **PNProdAU.txt** file you received from PEERNET and click the Open button to import the file.
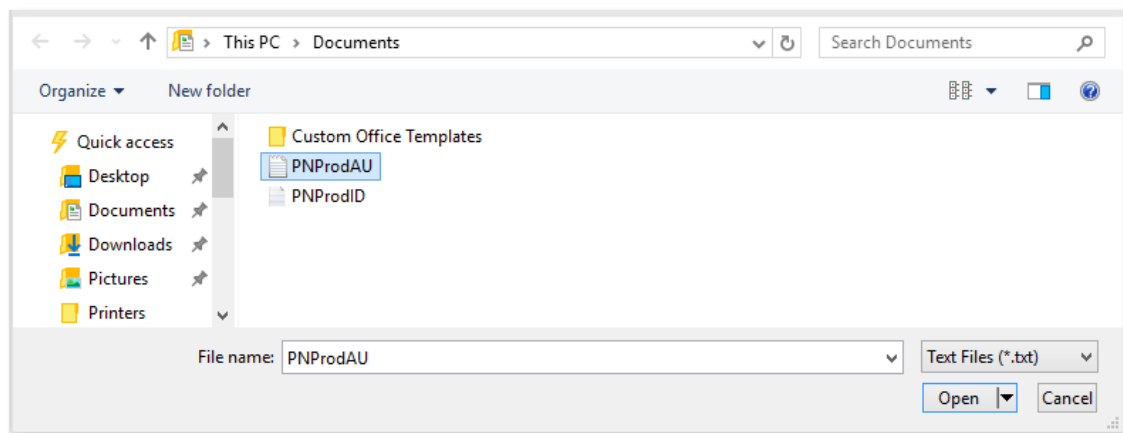
The authentication file is verified and you are automatically moved to the Activation Status Results screen.

Activation Status Results

This screen displays your activation status. Once the product is successfully activated, the *Activation Status* field will display your status as **Activated**.
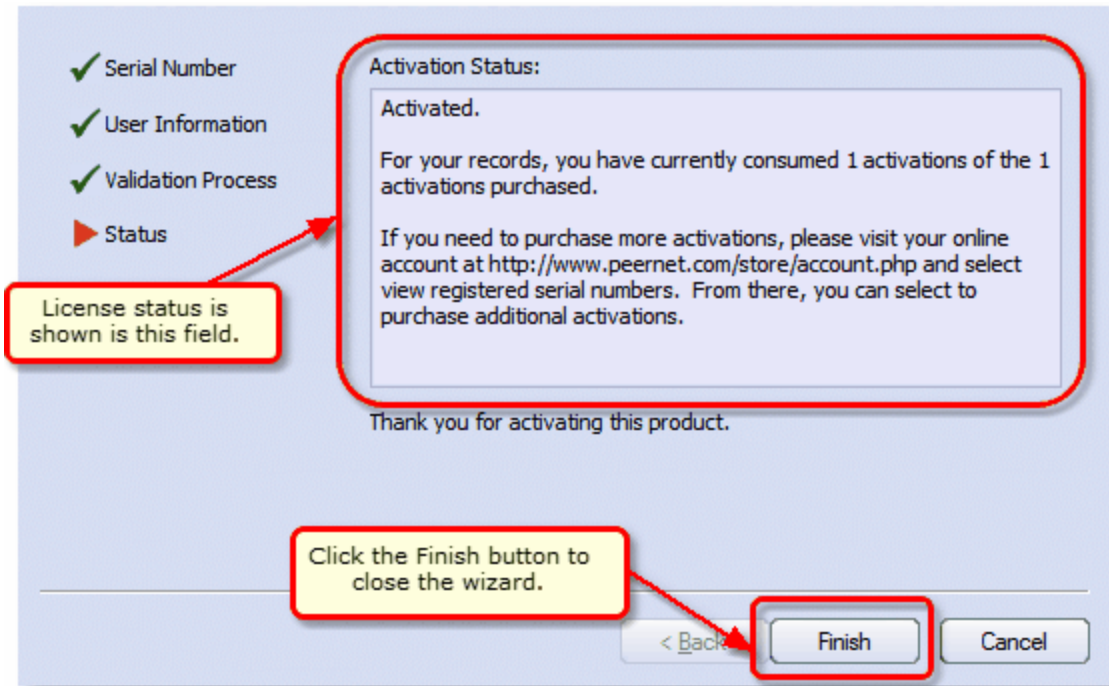
If an error occurred during activation it is displayed in the *Activation Status* field, such as the following error message that occurs if you have exceeded your license activations.
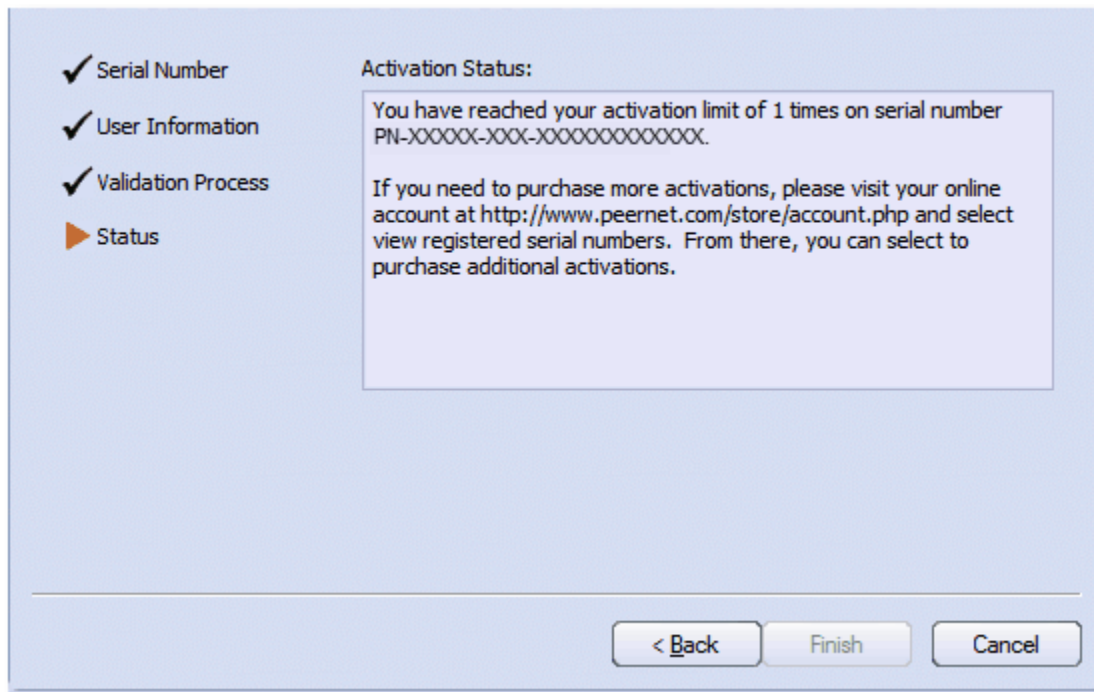
When you have used all your license activations, you will not be able to use the product on this computer until additional activations have been purchased.

1. Close the Activation Wizard and restart the activation process as explained in the section Launching the Activation Status dialog.

2. Choose *"I do not have a serial number and want to purchase"* to go to our on-line store where addition licenses can be purchased.
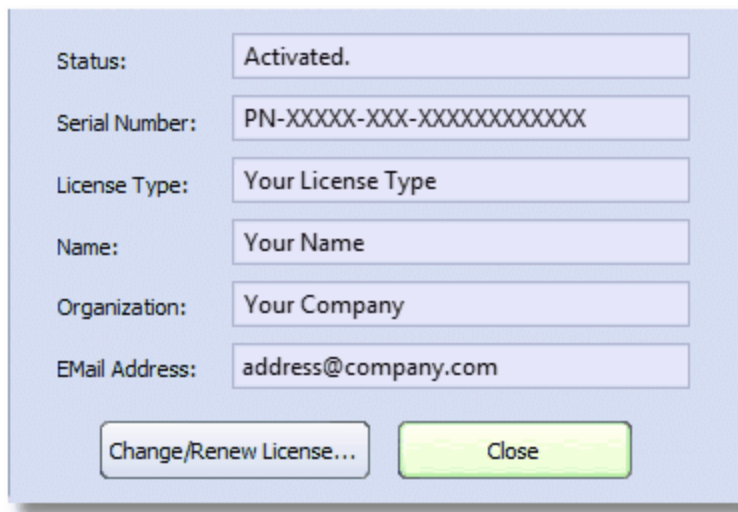
> 💡 If you are moving your license to a new computer, or if you have to re-install the software on your computer due to a crash, please contact PEERNET Sales at peernet@peernet.com with your current serial number for assistance.

Viewing Your Activation Status

To view your activation status, launch the Activation Wizard by going to All Programs – Raster Image Printer 11.0 – License… from the Windows Start menu. See Launching the Activation Status dialog section for detailed instructions.

If you have purchased the product, the *Status* field will display *Activated*, and your serial number, name, organization and email address are also displayed.

The **Change License...** button can be used to change your license. For example, you would use this button when upgrading an *End User License* to an *Unlimited End User License* **within the same product version**. It cannot be used to upgrade between product versions, i.e. you cannot use this button to upgrade a version 10.0 install to a version 11.0.

Status:	Activated.
Serial Number:	PN-XXXXX-XXX-XXXXXXXXXXXX
License Type:	Your License Type
Name:	Your Name
Organization:	Your Company
EMail Address:	address@company.com

Change/Renew License…   Close

Working With the Raster Image Printer

Create your files using the Raster Image Printer in 3 easy steps!

This section is designed as a "How-To" guide and describes the most common basic tasks you will use when working with Raster Image Printer. The objective is to familiarize you with the features available and give a brief overview of how each feature works. You can jump directly to the topic for each feature from the table below, or you can refer to the table of contents for a complete list of "How-To" topics and step-by-step instructions.

Save Options

Save your documents as JPEG, TIFF, PNG, as a PDF file, or one of the other supported image formats. Easily create serialized files (one image per page per file) or multi-paged files (all images in one file) and use the Append feature to combine files or to create sequences of images. File splitting can be used to create sequences of files based on file size or page count.

- ➤ Creating Your First JPEG Image

- ➤ Creating Your First TIFF Image

- ➤ Creating Your First PDF File

- ➤ Creating a Serialized Sequence of Images and Files

- ➤ Appending Multiple Files Into a Single TIFF Image

- ➤ Save Images and Files Without Prompting

Custom File Naming

Pre-set the file name and where it will be saved or have the driver prompt you each time. Advanced file naming can be used to set customized naming conventions.

- ➤ Changing Where the Files are Saved

PDF Security

Create secure PDF files using 40-bit or 128-bit encryption, password security, and permission levels to restrict access to document contents.

➢   [Setting PDF Security Options](#)

Compression Settings

Individual compression settings for JPG and TIFF images, and full compression options for PDF files combine to give you full control over the file size of your output.

➢   [Changing the Compression Methods](#)

Endorsement Options

Add header and footer endorsements such as text and page numbers to your pages as you create them. Font style, size and color can all be customized.

➢   [Placing Endorsements on Your Pages](#)

Page Processing

Take advantage of the built-in page processing features - auto-rotate your pages, crop sections of your page, automatically trim the margins and adjust the page brightness in one easy step.

➢   [Using the Crop Features](#)

➢   [Using the Trimming Features](#)

Image Processing

Copy each page of the document to a larger or smaller page with full alignment options. Resample each page to a particular width and height in pixels, as a percentage of the original size, or by setting a new image resolution (DPI).

➢   [Using the Copy To Image Feature](#)

➢   [Resizing Images Using Resampling](#)

Custom Paper Size

Supports user-defined paper sizes allowing virtually any size paper, including large paper sizes for use in AutoCAD programs.

➢   [Working with Large Paper Sizes](#)

Run Programs and Commands

Specify commands to be run at the start of the print job, at the end of the print job, at each page, and on file close.

➢   [Automatically View the Created Images and File](#)

Text Extraction

Includes text extraction capabilities with support for creating ASCII, UTF-8, and UTF-16 encoded files.

➢   [Extracting Text From the Images and File](#)

About Multi-page and Serialized Images and Files

The Raster Image Printer can produce both serialized (separated) and multi-page image and PDF files. Serialized images are created when you use the Raster Image Printer to output a multi-paged document as one of the serialized image file formats; each page of the document is saved as a single image in its own file. Multi-page images, on the other hand, consolidate all pages of a document into a single image. This has obvious advantages for anyone who is interested in electronic document delivery and archiving, since scanning long documents as separated files can be a tedious and time-consuming process.

Serialized Images and Files

A *serialized* image or file is a single file containing a single page of your document. When creating serialized images or files from a document with multiple pages, the images are created and stored sequentially, normally using a numerical naming scheme. For example, a three page document could be stored as 3 separate JPG images named file_001.jpg, file_002.jpg and file_003.jpg.

All of the output formats that Raster Image Printer can produce can be created as serialized files.

Multi-page Images and Files

A *multi-page* image or file is a single consolidated file containing multiple pages, similar to how a Word or Publisher document can have more than one page. As an example, when scanning in a user manual, it is usually easier to store one file that contains 120 pages than to store 120 separate files.

With Raster Image Printer, you can convert documents of any size into multi-page TIFF images or PDF files directly from any Windows application by simply printing the entire document as you normally would if you were producing a paper copy of the document.

Viewing Multi-page Images

Many professional photo retouching software systems do not read multi-page images of any kind unless they are proprietary to the manufacturer. However, most recent fax file viewers and imaging applications will be able to read these images.

All Windows operating systems starting with Windows 2000 come with a standard imaging tool that reads most multi-page image files. The Raster Image Printer can be set to automatically launch the imaging application to view the file when created. See the section on Viewing Your Images or the section Automatically View the Created Images and Files for more information.

Setting Printing Preferences

You can configure your printing preferences (or printer settings) each time you print a document or you can configure the default printing preferences to be the same for all documents that you send to a printer.

If you always need to create a particular type of image or file, follow the steps in Setting Printing Preferences for All Documents.

Setting Printing Preferences from within an Application

You can access the preferences each time you print a file from the `Print` dialog when printing from most applications. This will only change the printer settings for this document at the time of printing.

In most applications, the printing preferences are located on the `Print` dialog, normally found on the program's File menu. In most applications you will need to click a button labeled similar to "`Options`", "`Preferences`", or "`Advanced Options`". This will depend on the application you are running.
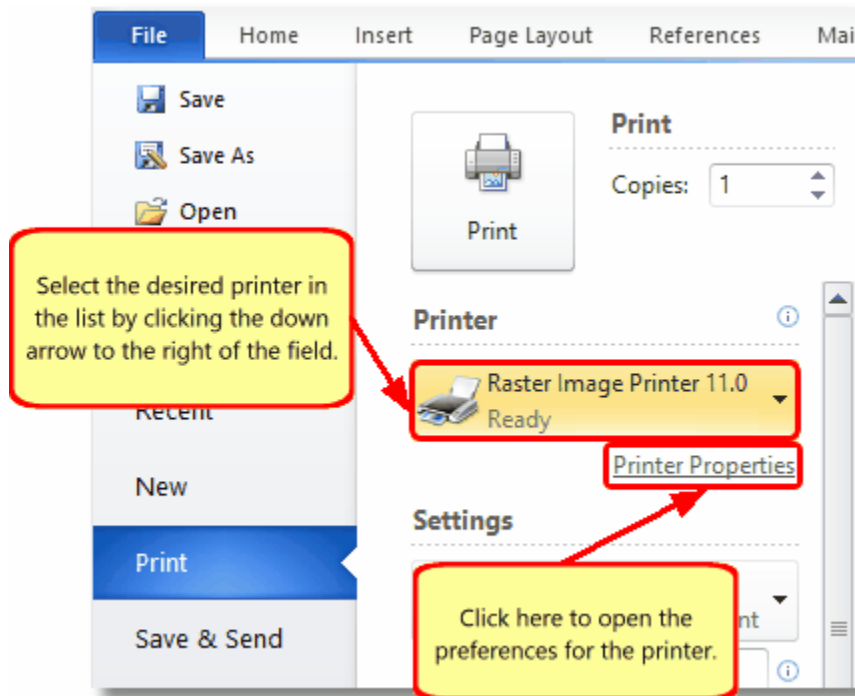
Example print dialog from Microsoft Word

Setting Printing Preferences for All Documents

Setting the preferences through the *Printers* folder (this is the *Devices and Printers* folder on Windows 7 and later, or the *Printers and Faxes* folder on Windows Vista and earlier) will set them globally so that the same options will be used when you print to Raster Image Printer from any application.

On Windows 10, Windows Server 10

For quick access to the options, a menu item has been added to the Raster Image Printer menu in the Windows Start menu

You can access this menu item by going to All Programs - Raster Image Printer 11.0 - Properties...

You can also find the options by doing either of the following:

1. From the **Start** menu, type "*Printers*" in the Search box and press the Enter (or *Return*) key to open the **Devices and Printers** window, then follow from Step 4 below.

2. Or from the *Start* menu, select *Control Panel*.

3. Select *Devices and Printers* to open the folder.

4. Locate the Raster Image Printer 11.0 in your list of printers and right-click the printer.

5. Select Printing Preferences... from the context menu to display the *Raster Image Printer 11.0 Printing Preferences* dialog. The tabs across the top of the dialog show the different settings that can be customized.

On Windows 7, Windows Server 2008 R2

For quick access to the options, a menu item has been added to the Raster Image Printer menu in the Windows Start menu

You can access this menu item by going to All Programs - Raster Image Printer 11.0 - Properties...

You can also find the options by doing either of the following:

1. From the **Start** menu, type "*Printers*" in the Search box and press the Enter (or *Return*) key to open the **Devices and Printers** window, then continue from Step 3 below.

2. Or from the Start menu, select Devices and Printers.

3. Locate the Raster Image Printer 11.0 in your list of printers and right-click the printer.

4. Select **Printing Preferences...** from the context menu to display the *Raster Image Printer 11.0 Printing Preferences* dialog. The tabs across the top of the dialog show the different settings that can be customized.

On Windows Vista, Windows Server 2008

For quick access to the options, a menu item has been added to the Raster Image Printer menu in the Windows Start menu

You can access this menu item by going to All Programs - Raster Image Printer 11.0 - Properties...

You can also find the options by doing either of the following:

1. From the **Start** menu, type "*Printers*" in the Search box and press the Enter (or *Return*) key to open the **Printers** folder, then continue from Step 4 below.

2. Or from the Start menu, select Control Panel.

3. Click on the *Printer* option in the Hardware and Sound section

4. Locate the Raster Image Printer 11.0 in your list of printers and left-click to select it.

5. Click on *"Select printing preferences"* in the toolbar, or right-click the printer and select Printing Preferences… from the context menu to display the *Raster Image Printer 11.0 Printing Preferences* dialog. The tabs across the top of the dialog show the different settings that can be customized.

On Windows XP or Windows Server 2003

For quick access to the options, a menu item has been added to the Raster Image Printer menu in the Windows Start menu.

You can access this menu item by going to All Programs - Raster Image Printer 11.0 - Properties…

You can also find the options by doing the following:

1. From the Start menu, select Printers and Faxes.

2. Locate the Raster Image Printer 11.0 in your list of printers and left-click to select it.

3. Right-click on the printer and select Printing Preferences... from the context menu to display the *Raster Image Printer 11.0 Printing Preferences* dialog. The tabs across the top of the dialog show the different settings that can be customized.

Creating Your First JPG Image

You need to be able to open and print your original document in order to create a JPG image. For example, to create a JPG from a Word document, you would need to have Microsoft Word, or another application that can open and print Word documents, installed on your computer.

> 💡 **JPG or JPEG?**
> JPEG stands for *Joint Photographic Experts Group*, which is the name of the committee that created the image file format. Both **JPG** and **JPEG** can be used as file extensions for this image type. The JPG file extension was originally used in older operating systems that could only support three-letter file extensions.

Step by Step Instructions

1. Open the document you want to convert into a JPG image.

2. Select `File - Print` from your application.

- In the *Name:* field choose the **Raster Image Printer 11.0** from the list of printers.

- Click the `OK` button on the `Print` dialog (or the appropriate button on your application's print dialog) to send the document to the printer.

3. Choose where to save your JPG image from the Save Image File dialog.
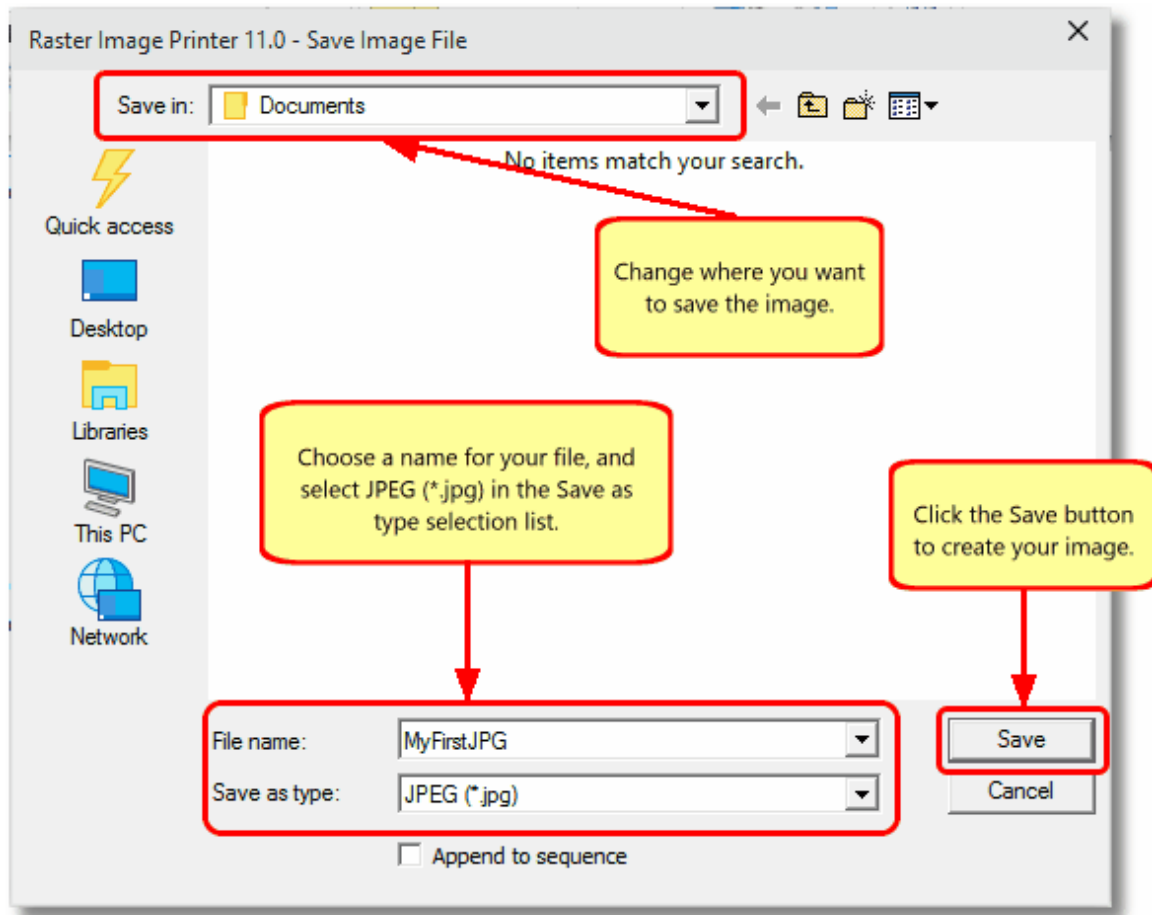
- Use the *Save in:* field to choose a folder to store your JPG image. Your Documents folder will be selected for you by default.

- In the *File name:* field, enter a name for your JPG image. A default name for your image has been filled in based on the name your application used when it printed your document to the Raster Image Printer.

- In the Save as type: field select **JPEG (*.jpg)** as the type of file to create.

- Click the Save button to create the image. The image will be created in the chosen folder with the name specified.

Creating Your First TIFF Image

You need to be able to open and print your original document in order to create a TIFF image. For example, to create a TIFF image from a PDF file, you would need to have Adobe Reader or another PDF viewer that has printing capabilities, installed on your computer.

Step by Step Instructions

1. Open the document you want to convert into a TIFF image.

2. Select File - Print from your application.
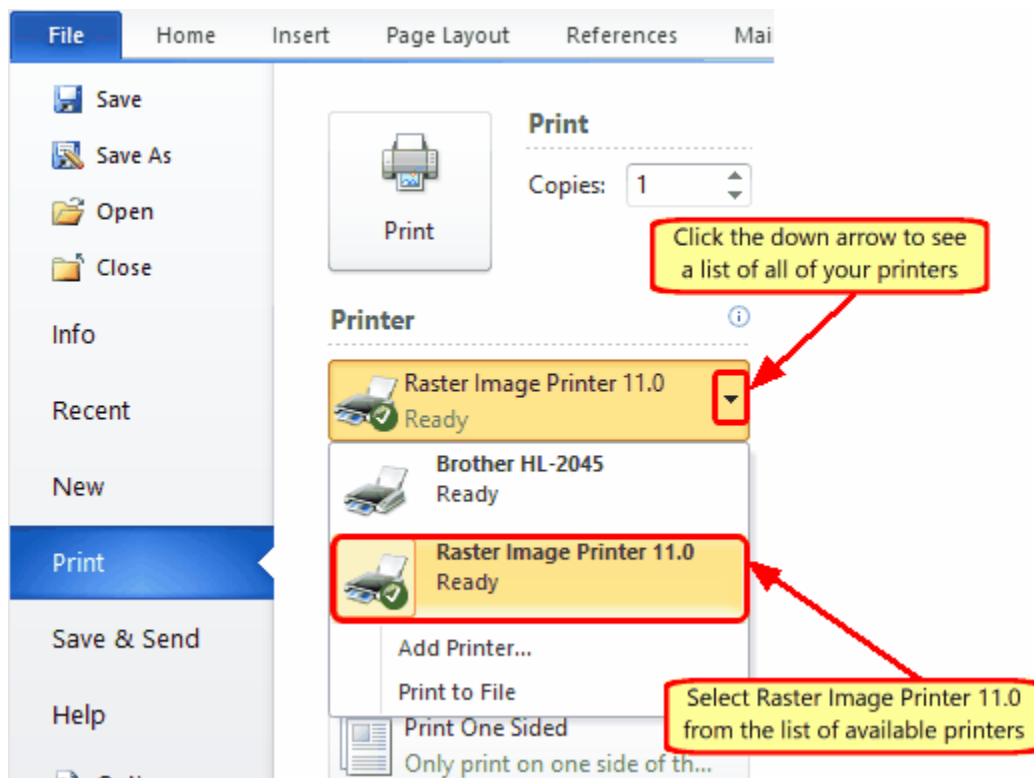
- In the printer field choose the **Raster Image Printer 11.0** from the list of printers.

- Click the OK button on the Print dialog (or the appropriate button on your application's print dialog) to send the document to the printer.

3. Choose where to save your TIFF image from the Save Image File dialog.
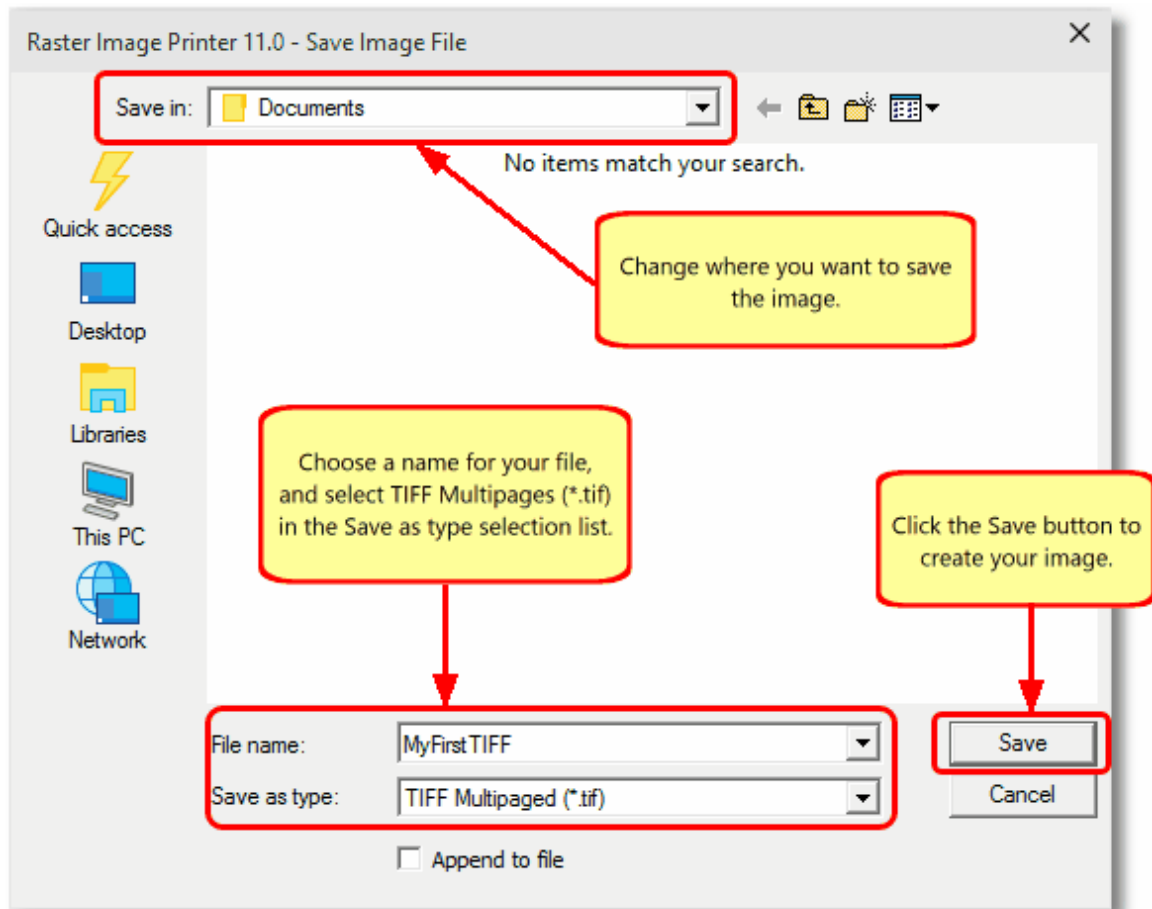
- Use the *Save in:* field to choose a folder to store your TIFF Image. Your **Documents** folder will be selected for you by default.

- In the *File name:* field, enter a name for your TIFF image. A default name for your image has been filled in based on the name your application used when it printed your document to the Raster Image Printer.

- In the *Save as type:* field select **TIFF Multipaged (*.tif)** as the type of file to create.

- Click the Save button to create the image. The image will be created in the chosen folder with the name specified.

Creating Your First PDF File

You need to be able to open and print your original document in order to create a PDF file. For example, to create a PDF file from a Word document, you would need to have Microsoft Word, or another application that can open and print Word documents, installed on your computer.

Step by Step Instructions

1. Open the document you want to convert into a PDF file.

2. Select `File - Print` from your application.
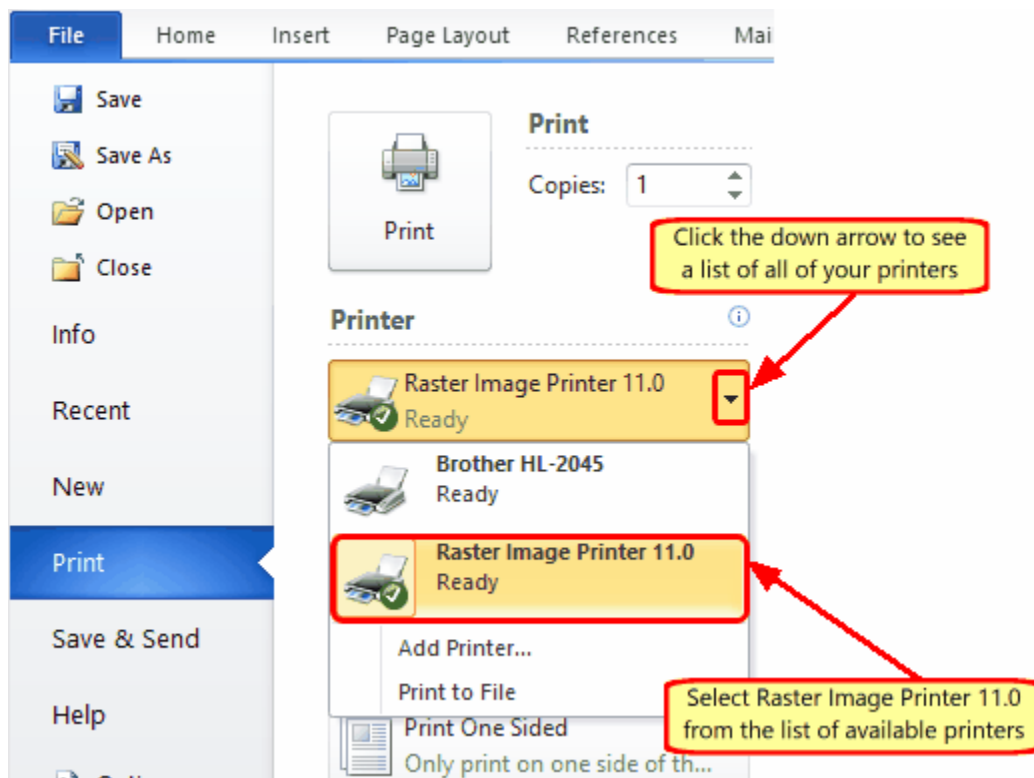
*   In the *Name:* field choose the **Raster Image Printer 11.0** from the list of printers.

*   Click the `OK` button on the `Print` dialog (or the appropriate button on your application's print dialog) to send the document to the printer.

3. Choose where to save your PDF file from the Save Image File dialog.
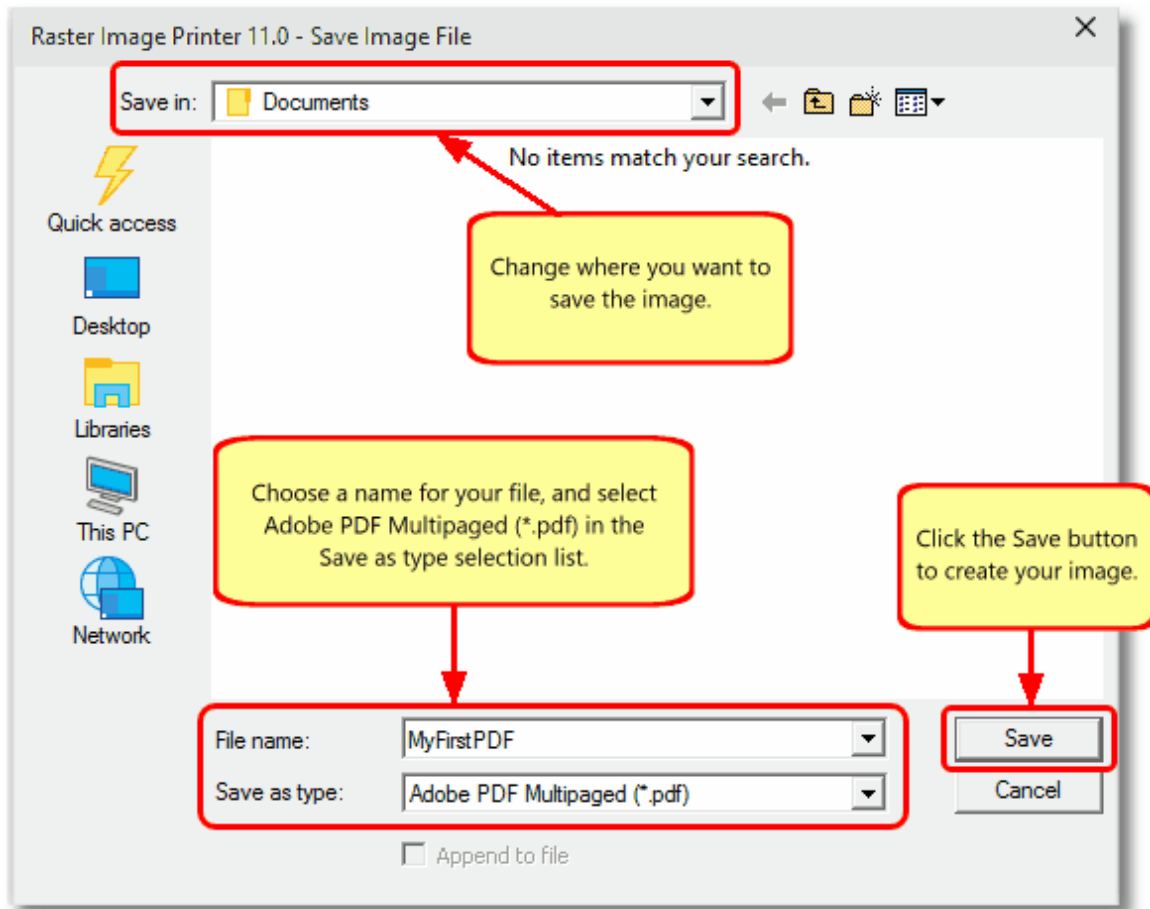
- Use the *Save in:* field to choose a folder to store your PDF file Image. Your Documents folder will be selected for you by default.

- In the *File name:* field, enter a name for your PDF file. A default name for your image has been filled in based on the name your application used when it printed your document to the Raster Image Printer.

- In the *Save as type:* field select **Adobe PDF Multipaged (*.pdf)** as the type of file to create

- Click the Save button to create the PDF file. The file will be created in the chosen folder with the name specified.

Viewing Your Images

As most newer operating systems already include the Windows Photo Viewer, viewing an image is as simple as double-clicking the new image file in a File Explorer (Windows Explorer on older operating systems). The sections below outline the various image viewers available for older operating systems.

Viewing Images Using Windows Photo Viewer

Windows Photo Viewer is normally included on Windows operating systems starting with Windows 7. If you are viewing an image that has more than one page, you will see a page navigation control just below the image that allows you to move from page to page. When viewing a serialized image, the page navigation control is not shown as there is only one page.
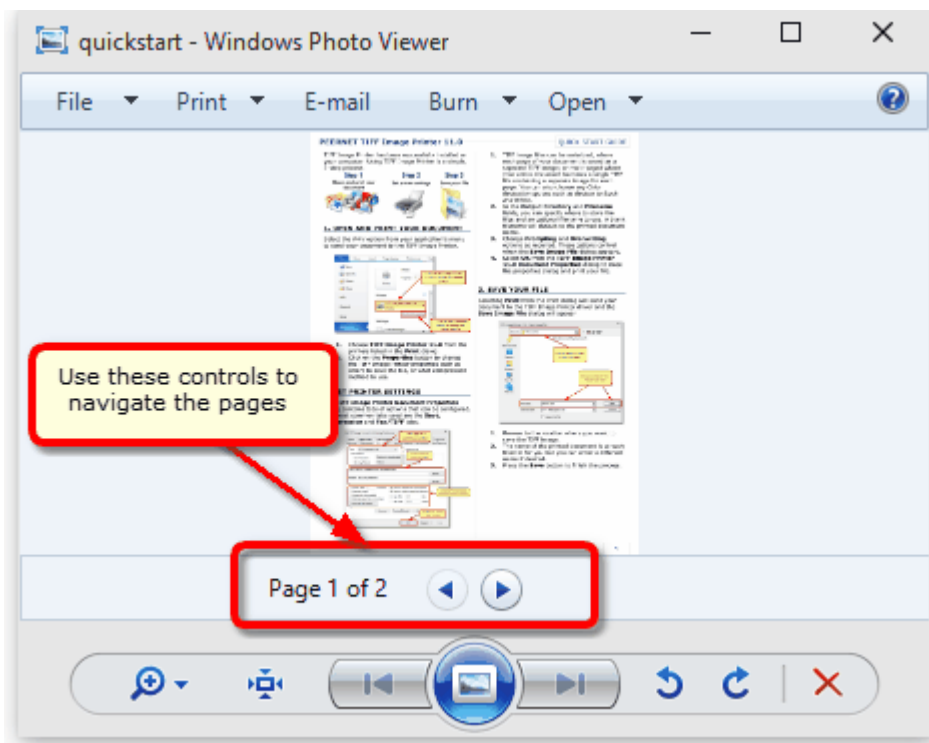
Viewing Images on Windows Vista, Windows Server 2008

On Windows Vista you can view both serialized and multi-paged images using Windows Photo Gallery which is normally installed as part of the operating system. If you are viewing an image that has multiple pages, you will see a *page navigation control* just below the image that allows you to move from page to page. When viewing a serialized image, the page navigation control is not shown as there is only one page.

Another common multi-page image viewer is Microsoft Office Document Imaging, which is included in Microsoft Office XP, Office 2003 and Office 2007.

On Windows XP, Windows Server 2003

On Windows XP you can view both serialized and multi-paged JPG images using Windows Picture and Fax Viewer which is normally installed as part of the operating system. If you are viewing an image that has multiple pages, you will see a *page navigation control* just below the image that allows you to move from page to page. When viewing a serialized image, the page navigation control is shown but the *Next Page* and *Previous Page* controls are disabled.
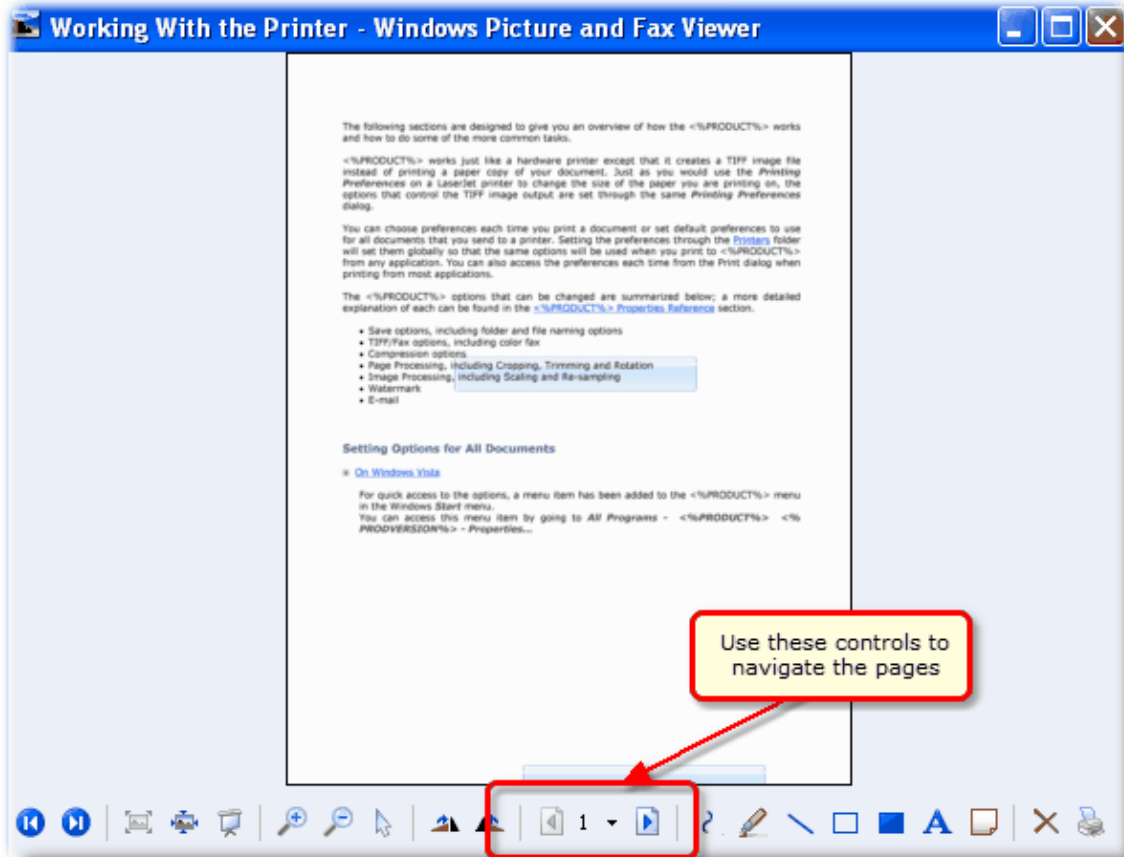
Another common multi-page image viewer is Microsoft Office Document Imaging, which is included in Microsoft Office XP, Office 2003 and Office 2007.

Viewing Your PDF File

Viewing PDF files is as simple as double-clicking the file in Windows Explorer. In most cases there will already be a PDF file viewer, usually Adobe Reader, installed on your computer.
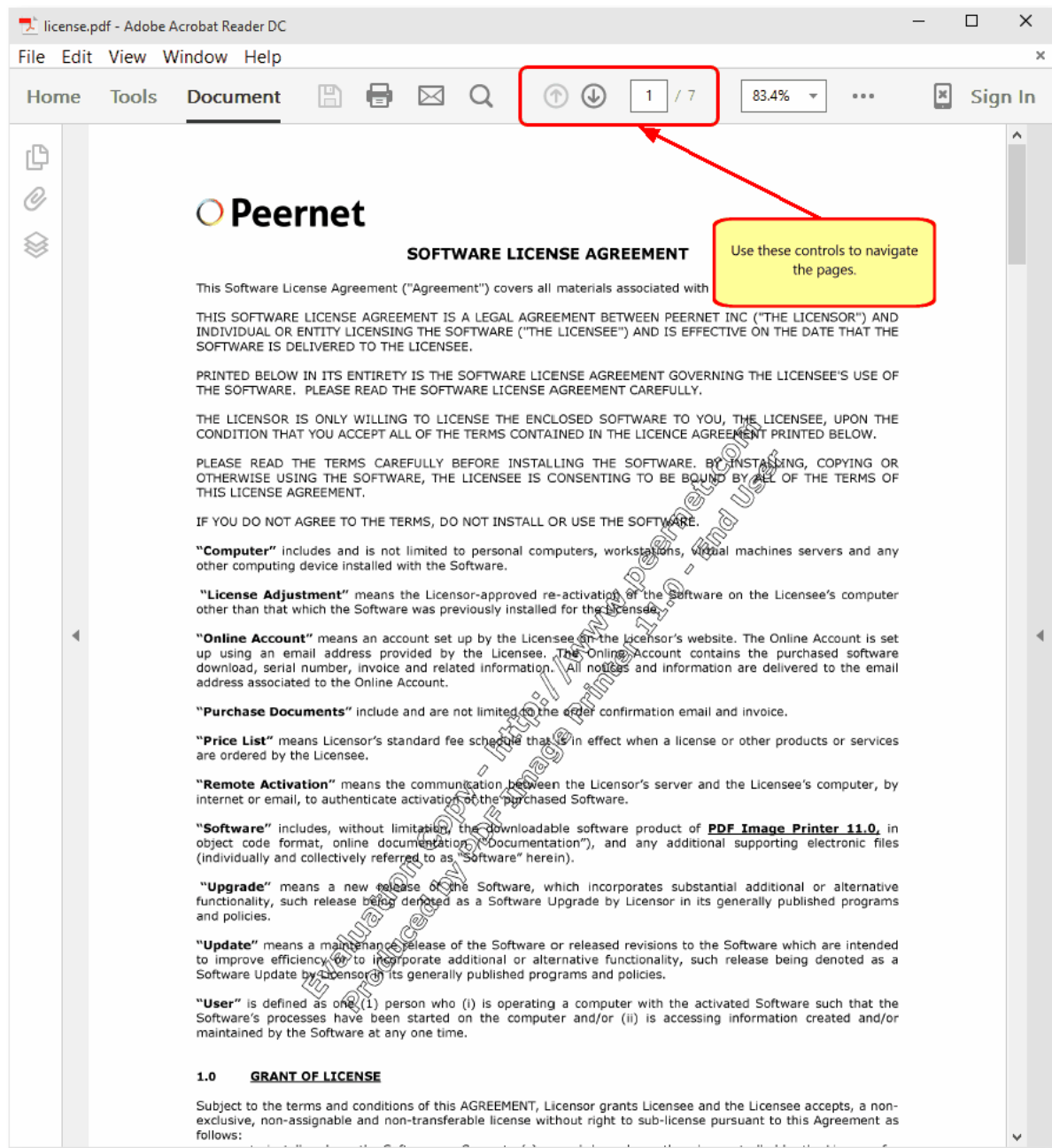
If Adobe Reader is not installed on your computer, it can be downloaded from Adobe's website.

Changing Where the Files are Saved

The Raster Image Printer will save all output files to the Documents folder (*this is the My Documents folder on Windows XP*) by default. You can change this to any desired folder on your desktop.

All file output options are controlled through the Printing Preferences dialog. Close any open applications that you are printing from before making changes as most applications will not see your changes until they are re-started.

Step by Step Instructions

> 💡 Changing the save location using the following steps is a global change, meaning that all applications will start with this location in the **Save Image As** dialog when printing to Raster Image Printer.

1. From the Start menu, go to All Programs - Raster Image Printer 11.0 - Properties...

2. Click the *Save* tab in the Printing Preferences dialog.
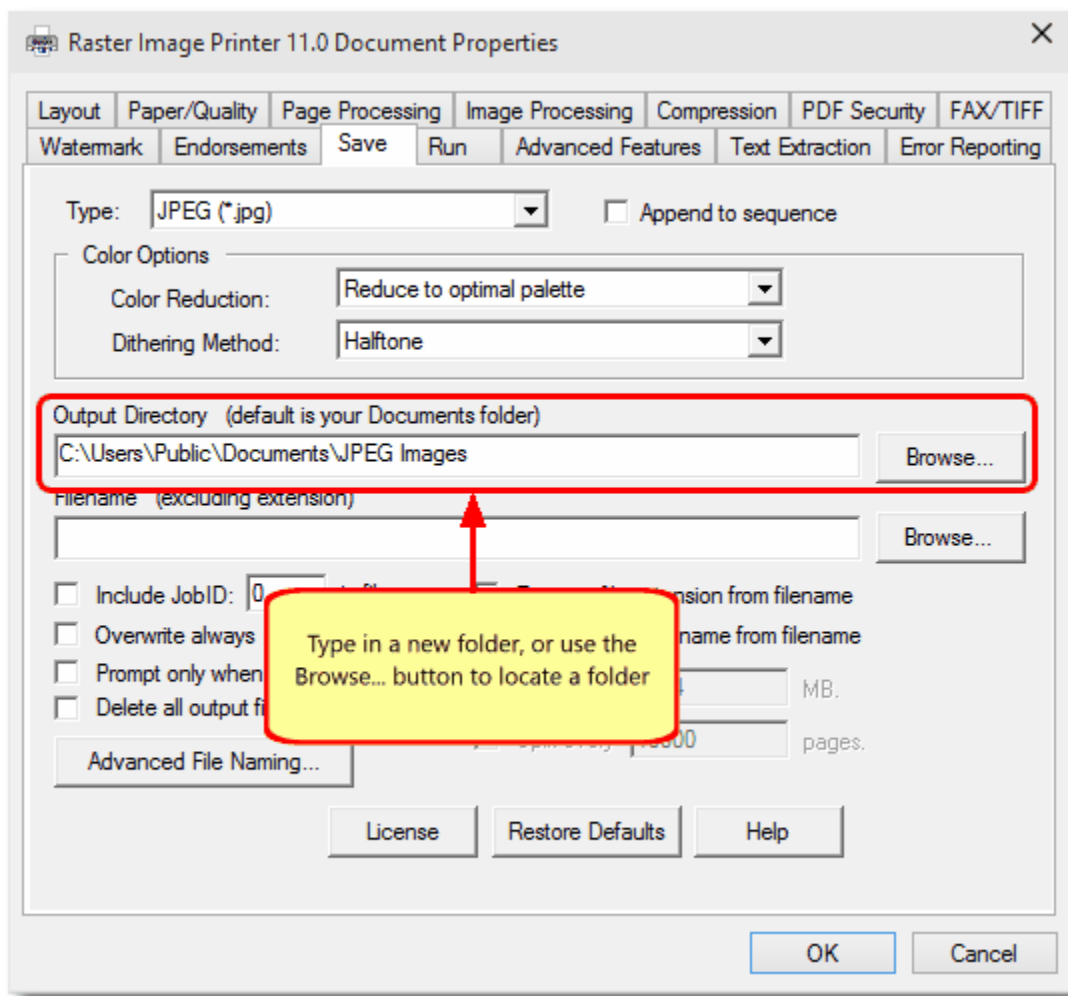
- In the *Output Directory* field, type in the folder where you want to save your output files. You can also use the Browse… button to find a folder on your computer. If the field is left blank, the **Documents** folder is used by default. In the above dialog we are creating a new folder *C:\Users \Public\Documents\JPG Images*.

3. Click the Apply button and then the OK button to set the changes. If the output directory you typed in does not exist, you will be prompted to confirm creation of the new directory.

4. Printing to Raster Image Printer from any application now displays the Save Image dialog box starting in the directory chosen.

> **Universal Naming Convention**
>
> You can also save to mapped network drives and drives specified using Universal Naming Convention syntax.
>
> Commonly abbreviated to UNC, universal naming convention is a common syntax for describing a shared network resource such as a file or directory. The UNC syntax for Windows is
>
> \\ComputerName\SharedFolder\Resource.

Saving Files Without Prompting

Each time you print, the Raster Image Printer will prompt you with the Save Image File dialog to choose where you want save the output file. You can change this so that the output file is always saved in the same location without showing the dialog.

All output options are controlled through the Printing Preferences dialog. Close any open applications that you will be printing from before making changes as not all applications will see your changes until they are re-started.

Step by Step Instructions

> Changing the prompting options using the following steps is a global change, meaning that no matter what application you use when printing to Raster Image Printer, the **Save Image As** dialog will not appear.

1. From the Windows Start menu, go to All Programs - Raster Image Printer 11.0 - Properties...

2. Click on the *Save* tab in the Printing Preferences dialog.

- In the *Output Directory* field, type in the folder where you want to save your output files. You can also use the Browse… button to find a folder on your computer. If the field is left blank, the Documents folder is used by default.

- Leave the *Filename* field blank to have Raster Image Printer use the name submitted by the application when the file is printed as the output file name. If you specify a filename, and have the *Overwrite always* option checked, each print will overwrite the previous file.

- Click the *Overwrite always* check box to turn on the automatic overwrite option. If an image file of the same name already exists, it will be replaced by the new file and no warning dialog will be shown.

- Click the *Prompt only when needed* check box to turn off the Save As dialog.

3. Click the Apply button and then the OK button to set the changes. If the output directory you typed in does not exist, you will be prompted to confirm creation of the new directory.

4. Printing to Raster Image Printer from any application now saves the output files into the chosen directory without displaying the Save Image dialog box.

Automatically View the Created Files

It is often convenient to have your output file automatically opened after it has been created. You can configure Raster Image Printer to do this using the Run properties.

All output options are controlled through the Printing Preferences dialog. Close any open applications that you are printing from before making changes as not all applications will see your changes until they are re-started.

Step by Step Instructions

> Changing the **Run** properties using the following steps is a global change, meaning that no matter what application you use when printing to Raster Image Printer, the created file will automatically be opened.
>
> This method will only work if an application that can open the output file is installed on your computer. For example, you will need an image viewer to open TIFF or JPG images, or a PDF viewer like Adobe Reader to open PDF files.

1. From the Windows Start menu, go to All Programs - Raster Image Printer 11.0 - Properties...

2. Click on the *Run* tab in the Printing Preferences dialog.
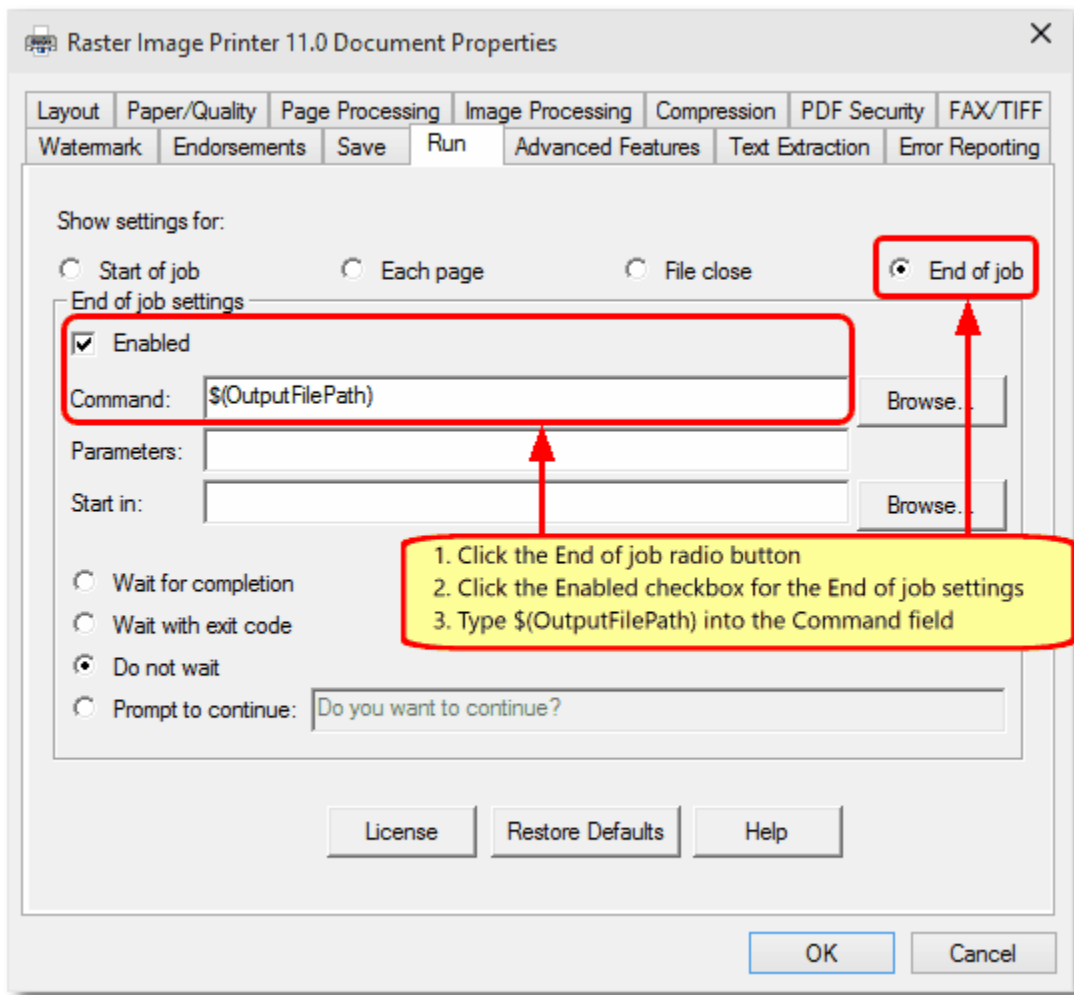
- In the *Show settings for* area, select the *End of job* radio button.

- Click *Enabled* to turn on the options for End of job.

- In the *Command:* field, type in the macro **$(OutputFilePath)**, if it is not there already.

3. Click the Apply button and then the OK button to set the changes.

> 💡 **What are Macros?**
> Macros are special strings that have been pre-defined by Raster Image Printer and are replaced with values supplied internally. In the above case, the macro **$(OutputFilePath)** is automatically replaced with the full path and name of the JPG image you are creating. When Raster Image Printer tries to *run*, or *open*, the JPG image, Windows will automatically open the file in the default viewer for JPG images.

More Information Regarding the Run Commands

When converting your document to a JPG image, the process can be split into four separate stages, or events. At each one of these stages, you can specify a command or program to be run. These events, in particular the *End of job event*, are often used to do an extra step, such as uploading the

file to an FTP server, once the image has been created.

In the above case we were only concerned with the last stage, *End of job*, which we used to automatically open the created file.

See the [Run](#) tab properties reference for more information.

Creating a Serialized Sequence of Files

In certain instances, such as a database report of invoices where each invoice is on a separate page, you may want to create a single file for each page of your document. This is called a serialized sequence, and can be created from a single input document, or combined with the append feature, created from a series of documents. Each file is named uniquely based on its page number, or its place on the sequence if you are appending sequences together.

For example, a three page report from an invoice database, created as JPG files, would create the following three files

- Invoice_001.jpg

- Invoice_002.jpg

- Invoice_003.jpg

Printing another database report of 4 pages and appending it to the same sequence would add the following four files:

- Invoice_004.jpg

- Invoice_005.jpg

- Invoice_006.jpg

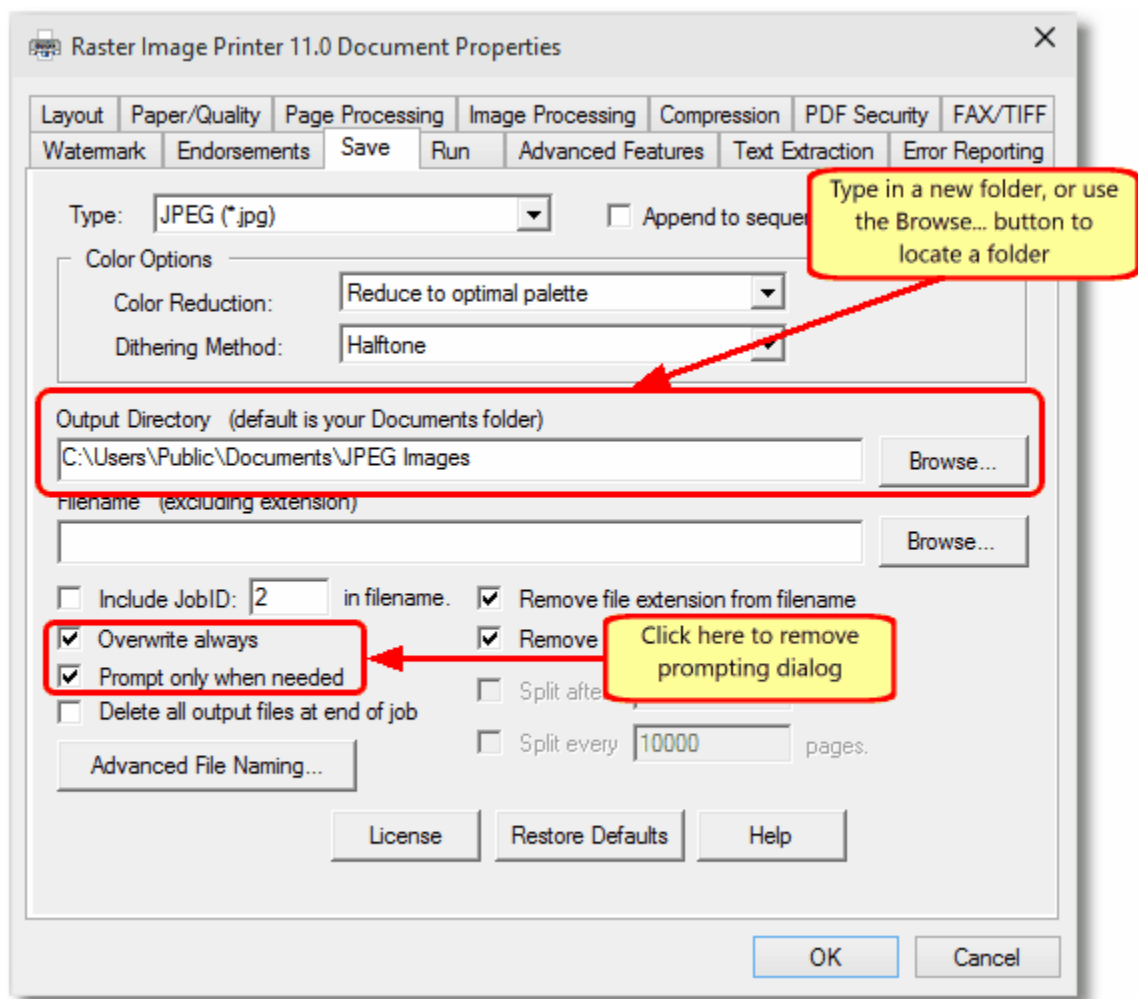- Invoice_007.jpg

The serialized and append options are controlled through the *Save* tab on the Printing Preferences dialog. Close any open applications that you will be printing from before making changes as not all applications will see your changes until they are re-started. Changing the options using the following steps is a global change, meaning that all applications will use these settings when printing to Raster Image Printer.

Creating Serialized Files From a Single File

The following steps show how to create a series of JPG images, one per page, from a single file, or in this case, a report of invoices printed from a database.These same steps can be used to create a serialized sequence of files using any of the output file types that Raster Image Printer can create.

Step by Step Instructions

> 💡 You can make the same changes outlined below through the Properties button on each applications's Print dialog as you print your files, but it is generally easier to make this change once, and then print all the files.

1. From the Windows Start menu, go to All Programs - Raster Image Printer 11.0 - Properties...

2. Click on the *Save* tab in the Printing Preferences dialog.
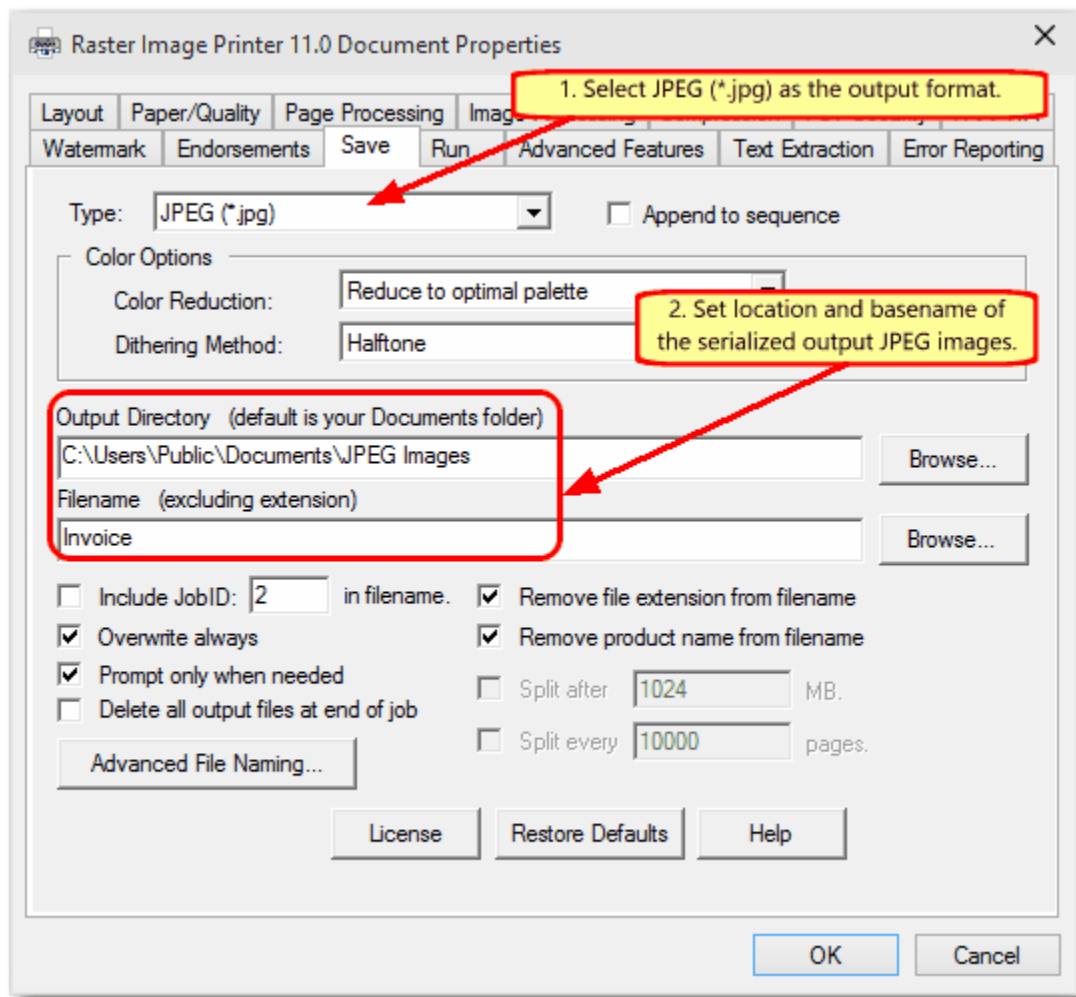
- In the *Type:* drop-down list of file formats select **JPEG (*.jpg)** as the type of file to create.

- In the *Output Directory* field, type in the folder where you want to save your JPG images. You can also use the Browse… button to find a folder on your computer. If the field is left blank, the Documents folder is used by default.

- In the *Filename* field, type in the base name you want to use for your sequence of JPG images.

3. Click the Apply button and then the OK button to set the changes. If the output directory you typed in does not exist, you will be prompted to confirm creation of the new directory.

4. Open your document and select File - Print from your application. In our sample, this would be the invoice report from a database.
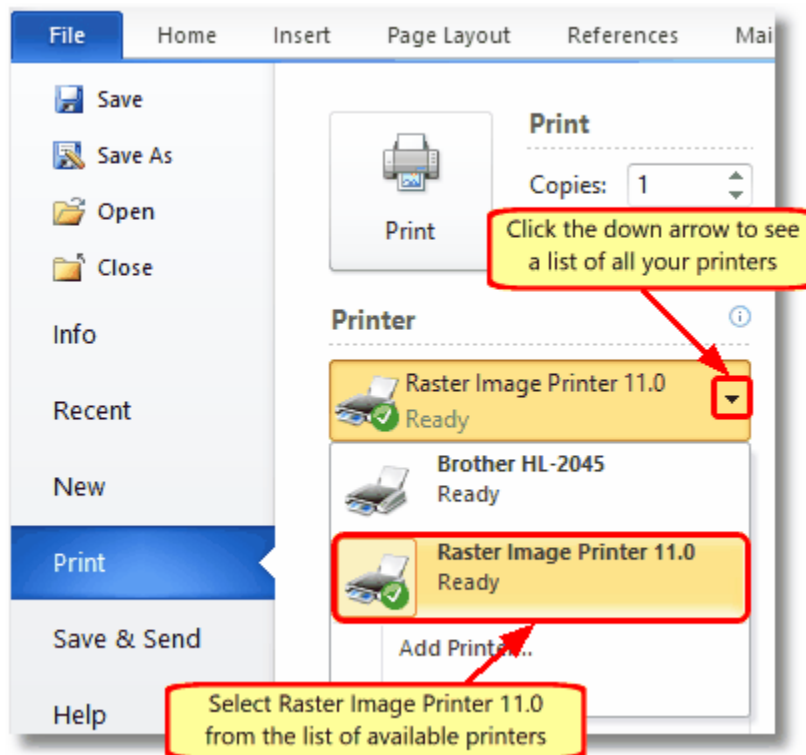
- In the printer field choose the **Raster Image Printer 11.0** from the list of printers.

- Click the OK button on the Print dialog (or the appropriate button on your application's print dialog) to send the document to the printer.

5. The Save Image File dialog will appear with the *Save in:?*, *File name:*, *Save as type:* and image options set as specified in Step 2. Leave this information as shown and click the Save button to create the JPG images.
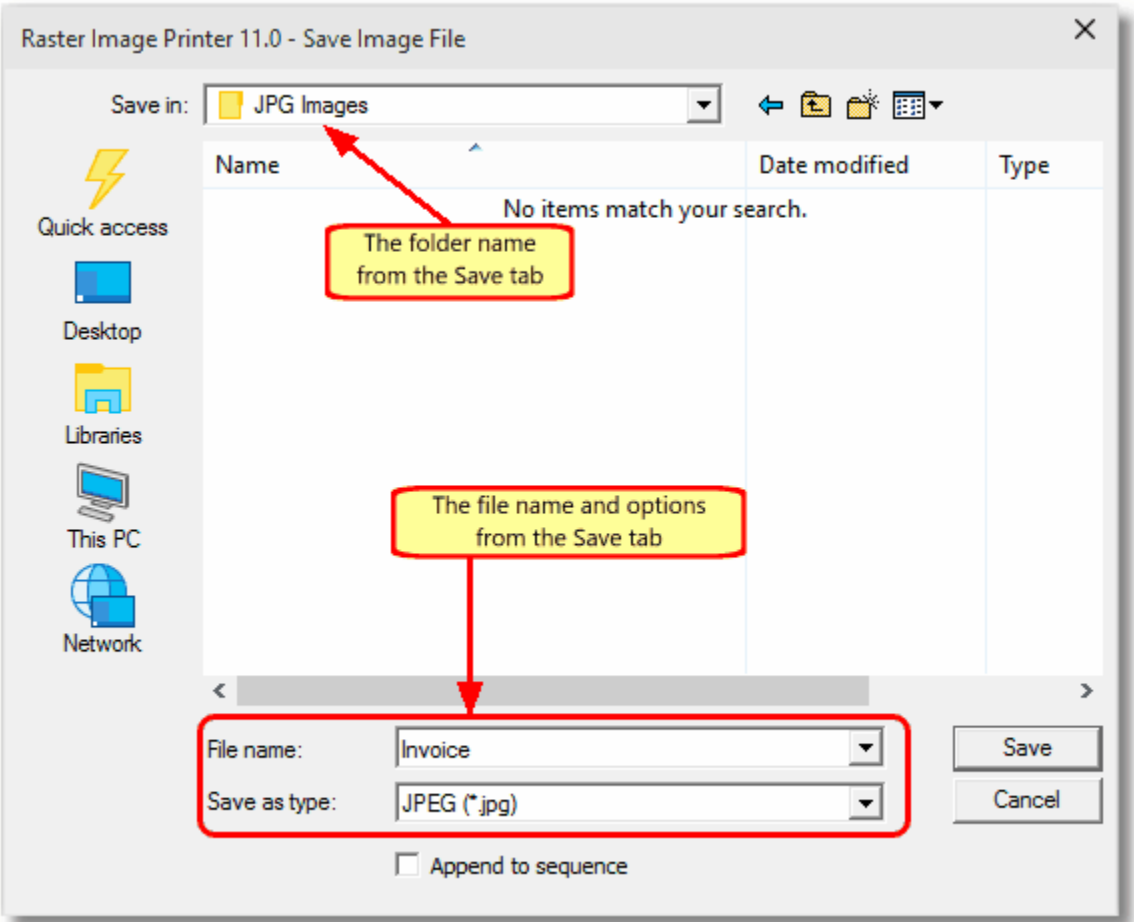
6. Each page printed from the report is saved as a separate JPG image.

Invoice_001.jpg	JPG File	2015-05-26 10:06 AM	314	
Invoice_002.jpg	JPG File	2015-05-26 10:06 AM	486	
Invoice_003.jpg	JPG File	2015-05-26 10:07 AM	378	
Invoice_004.jpg	JPG File	2015-05-26 10:07 AM	324	
Invoice_005.jpg	JPG File	2015-05-26 10:07 AM	259	

Adding to an Existing Sequence of Files

The following steps show how to add additional JPG images to the end of an existing sequence, or series, of existing JPG images.

Step by Step Instructions

1. From the Windows Start menu, go to All Programs - Raster Image Printer 11.0 - Properties...

2. Click on the *Save* tab in the `Printing Preferences` dialog.
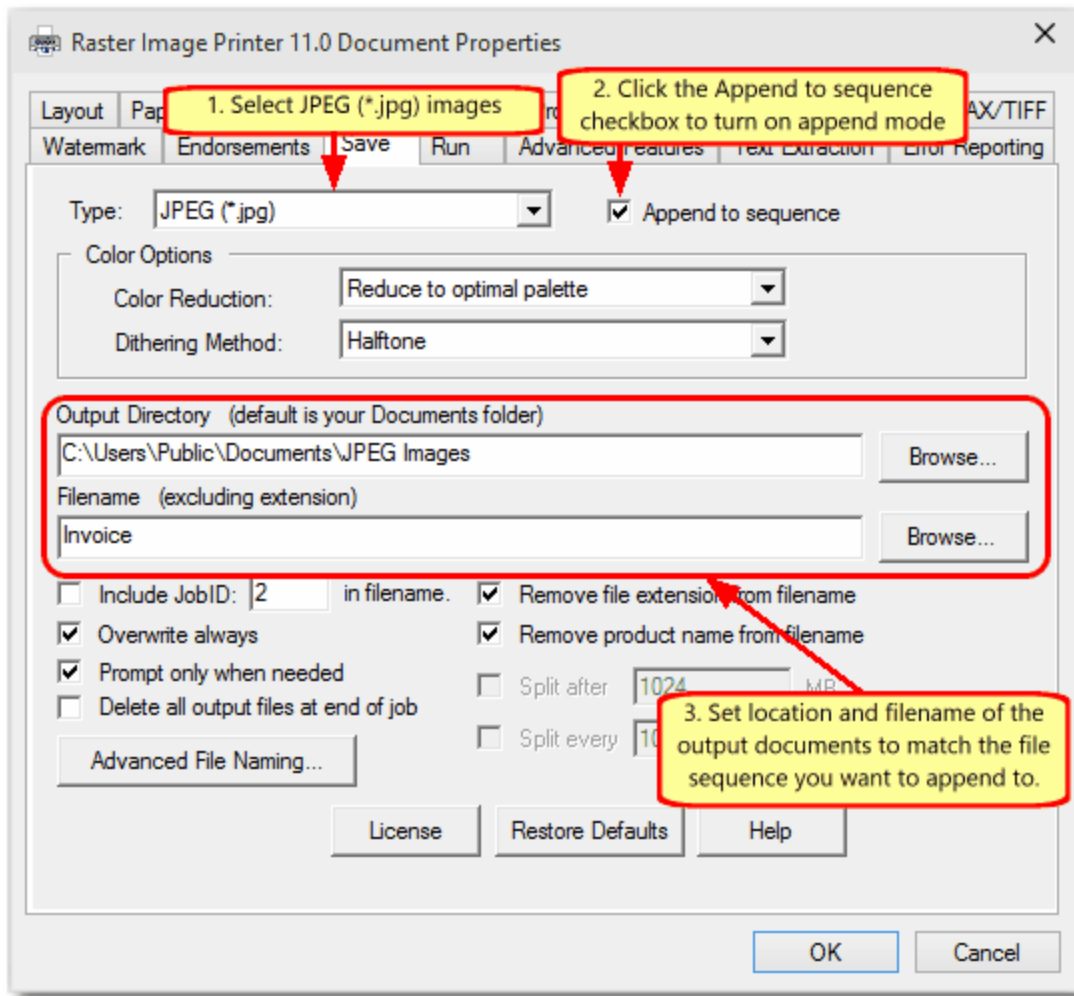
- In the *Type:* drop-down list of file formats select **JPEG (*.jpg)** as the type of file to create.

- Check the *Append to sequence* check box to turn on append mode. This will cause the new files to be added at the end of the existing series of files.

- In the *Output Directory* field, type in the folder where you want to save your JPG images. This has to be the same folder that contains the current existing series of JPG images. You can also use the `Browse…` button to find a folder on your computer. If the field is left blank, the **Documents** folder is used by default.

- In the *Filename* field, type in the base name you want to use for your JPG image. This has to be the same *base file name* used on the existing series of files. For example, to continue from invoice_003.jpg, use "invoice" as the filename. Changing this name cause a new sequence of files to be started.

3. Click the `Apply` button and then the `OK` button to set the changes.

4. Open your document and select `File - Print` from your application. In our sample, this would be another invoice report from a database.
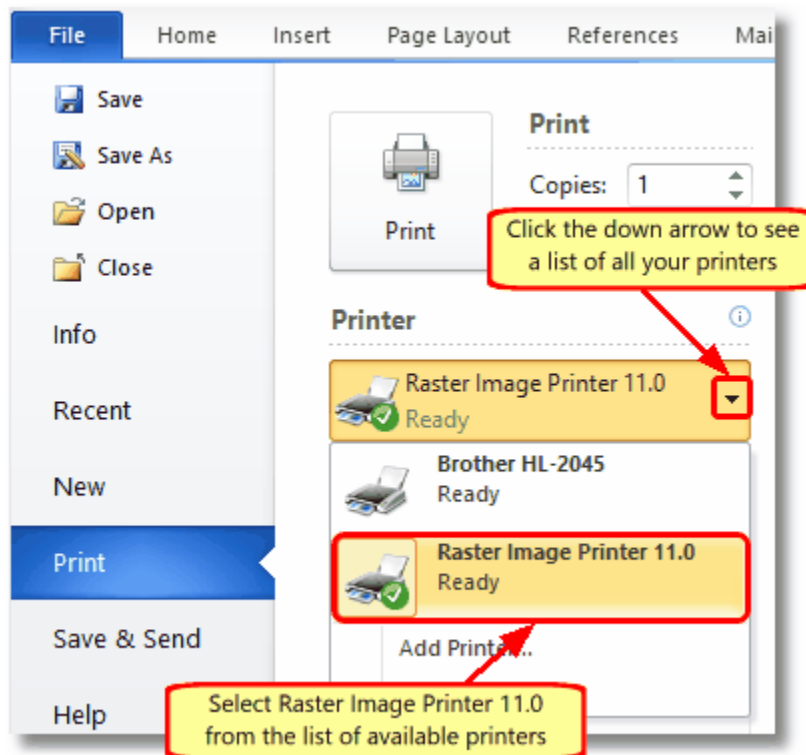
- In the printer field choose the **Raster Image Printer 11.0** from the list of printers.

- Click the OK button on the Print dialog (or the appropriate button on your application's print dialog) to send the document to the printer.

5. The Save Image File dialog will appear with the *Save in:*, *File name:* and image options set as specified in Step 2. Leave this information as shown and click the Save button to create the image or files.
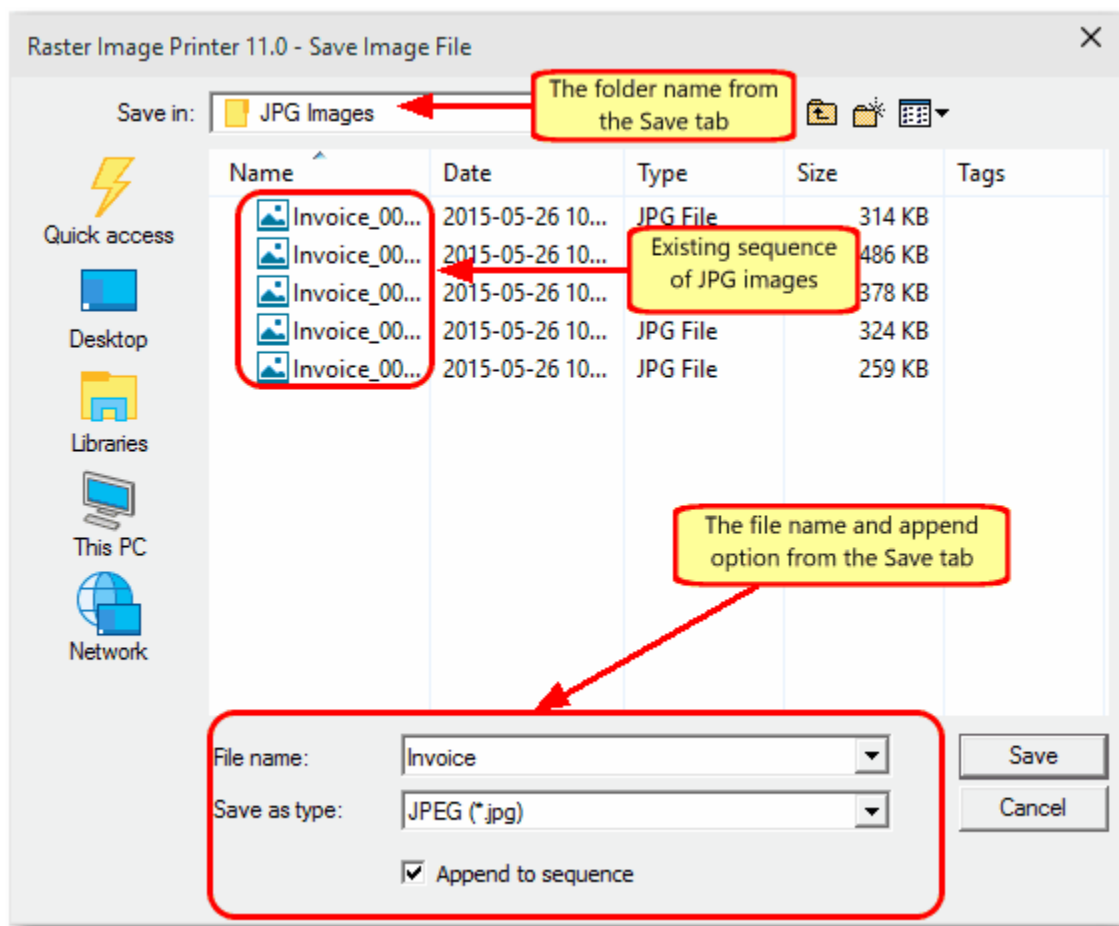
6. Each page printed from the report is saved as a separate file, added at the end of the existing series of files.
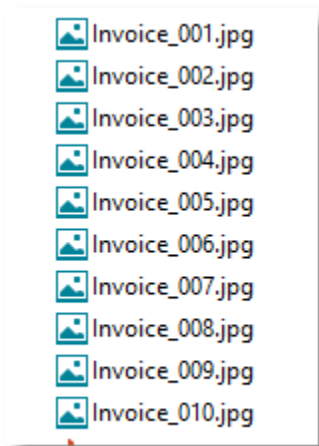
Reducing File Size with Color Reduction

All of the color reduction options are controlled through the *Save* tab in the Printing Preferences dialog. Close any open applications that you are printing from before making changes as not all applications will see your changes until they are re-started.

Changing the color reduction using the following steps is a global change, meaning that all applications will use these options when printing to Raster Image Printer.

See the following sections for information on color reduction and dithering methods:

➢ Color Reduction

➢ Dithering Methods

Step by Step Instructions

1. From the Start menu, go to All Programs - Raster Image Printer 11.0 - Properties…

2. Click the *Save* tab in the Printing Preferences dialog.
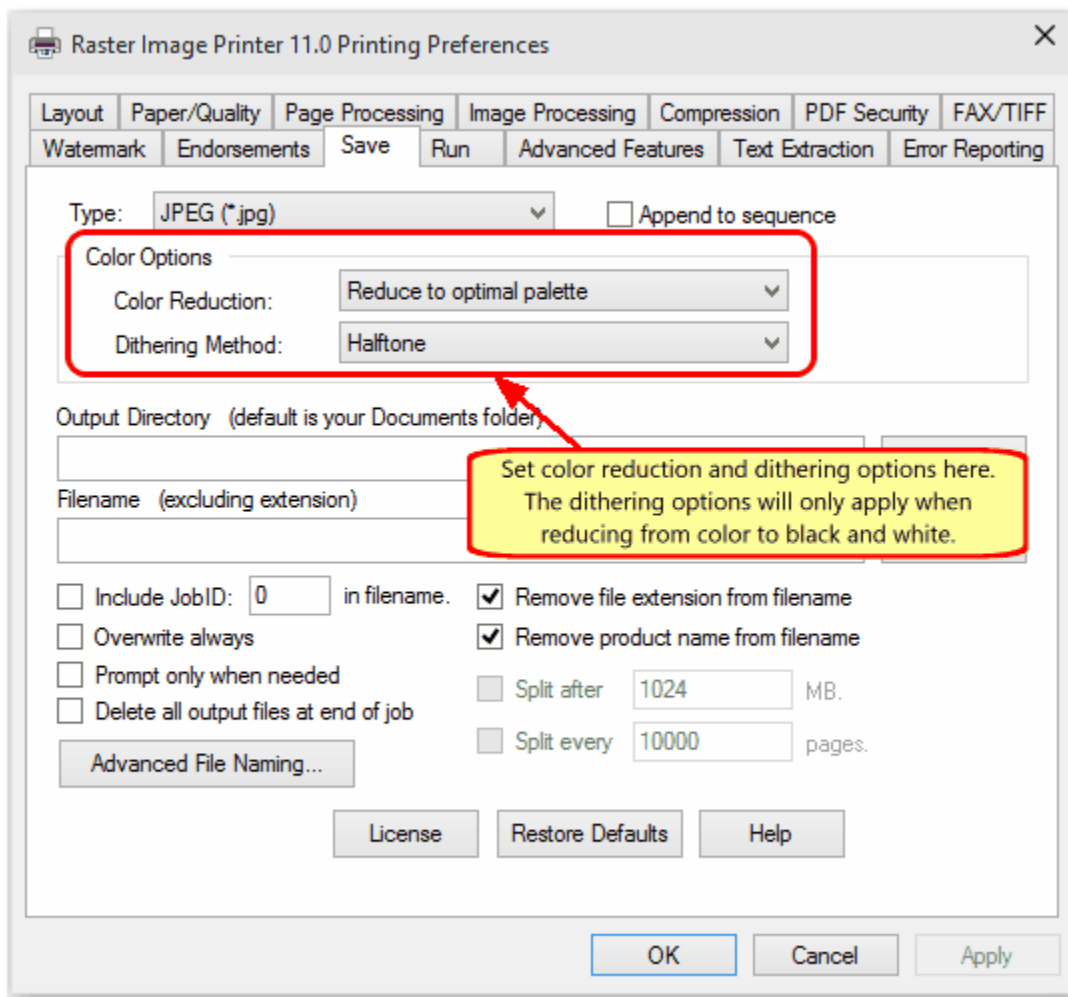
- In the *Color Options* section:

  - change the **Color Reduction** as needed. The default setting of *Reduce to optimal palette* will reduce each page down to the smallest number of colors required to represent each page.
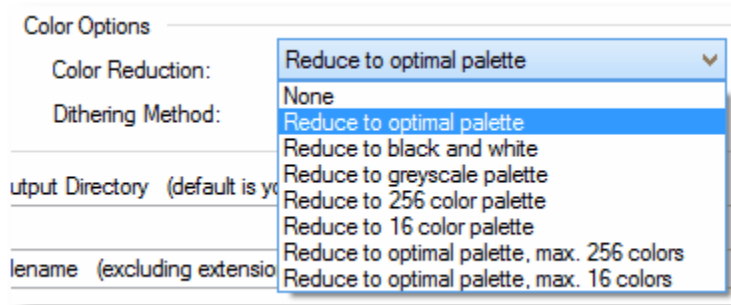
  - Select a **Dithering Method** to use when converting color to black and white (monochrome); the default is *Halftone* dithering.
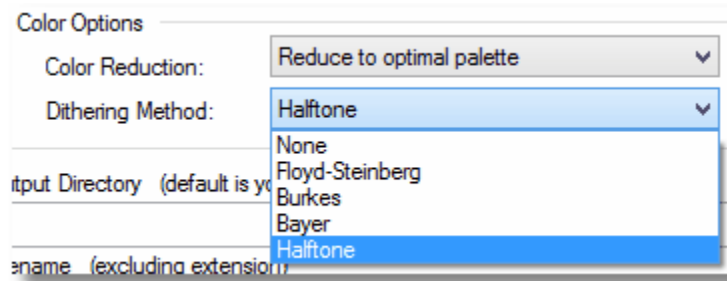
3. Click the Apply button and then the OK button to set the changes.

4. Printing to Raster Image Printer from any application will now use the color reduction settings chosen.

Color Reduction

There are eight choices for color reduction:

Color Reduction	What it does...
Reduce to optimal palette	Reduces each page down to the smallest number of colors needed to represent the page. Each page is counted separately, meaning the end result can be a JPG containing a mix of black and white, greyscale and color pages. If your pages are mixed black and white with occasional color, this method will often result in the smallest size file.
Reduce to black and white	All pages are reduced to monochrome, or black and white. This color reduction method uses the *Dithering Method* chosen to smooth the appearance of the text and information on the page.
Reduce to greyscale palette	Pages are reduced to a greyscale image composed exclusively of shades of neutral gray.
Reduce to 256 color palette	Reduce each page down to 256 colors.
Reduce to 16 color palette	Reduce each page down to 16 colors.
Reduce to optimal palette, max. 256 colors	Reduces each page down to the smallest number of colors needed to represent the page. Any color pages that result in more than 256 colors are reduced to 256 colors.
Reduce to optimal palette, max. 16 colors	Reduces each page down to the smallest number of colors needed to represent the page. Any color pages that result in more than 16 colors are reduced to 16 colors.
None	No color reduction is done. The color choice on the Paper/Quality tab determines if the page is rendered in full color or black and white.

Dithering Methods

The chosen *Dithering Method* only applies when *Reduce to black and white* is chosen. Dithering improves the appearance of color images that have been reduced to black and white. It is best to experiment when trying to determine the best dithering method for a given source image as the same dithering method may produce different results in different situations. An example of the different methods and the resulting images are show below.

Original image

Floyd-Steinberg

Burkes

Bayer

Halftone

> 💡 **Halftone Dithering**
> As halftone dithering simulates the image using black dots of varying size and spacing on a white background, it is only applied when the image is being reduced to black and white. If halftone dithering is selected and a color image is being created, *Floyd-Steinberg* dithering is used instead.

Reducing File Size with Compression Options

Changing the compression options can have a large impact on the size of the file but care must be taken when choosing compression methods as the file contents can also determine how well the chosen compression method will work. For instance, full color publication from Microsoft® Publisher or similar will compress better using JPG compression than using Packbits because JPG compression was designed to compress images with lots of color variation while Packbits works best with runs of solid colors in the image.

The default compression methods chosen by Raster Image Printer upon install will often give a good balance between file size and quality. When changing compression methods, take care to note the settings on the following tabs. These settings will affect the color model of the output file, which controls which compression method is used.

- the Color setting on the Paper/Quality tab

- any Color Reduction settings on the Save tab - reducing the amount of color needed to represent the image can also have a significant impact on the disk size of the resulting file.

- if fax mode is enabled in the FAX/TIFF tab

See the following sections for step-by-step guides to changing the compression methods used when creating JPEG, TIFF and PDF files. The compression options for all other output types cannot be changed.

- ➢   JPG Compression
- ➢   TIFF Compression
- ➢   PDF Compression

Reducing File Size with Compression Options

JPEG Compression

The JPEG compression options are controlled through the *Compression* tab in the `Printing Preferences` dialog.

Close any open applications that you are printing from before making changes as not all applications will see your changes until they are re-started.

Changing the compression methods using the following steps is a global change, meaning that all applications will use these options when printing to Raster Image Printer.

Step by Step Instructions

1. From the `Start` menu, go to `All Programs - Raster Image Printer 11.0 - Properties...`

2. Click the *Compression* tab in the `Printing Preferences` dialog.
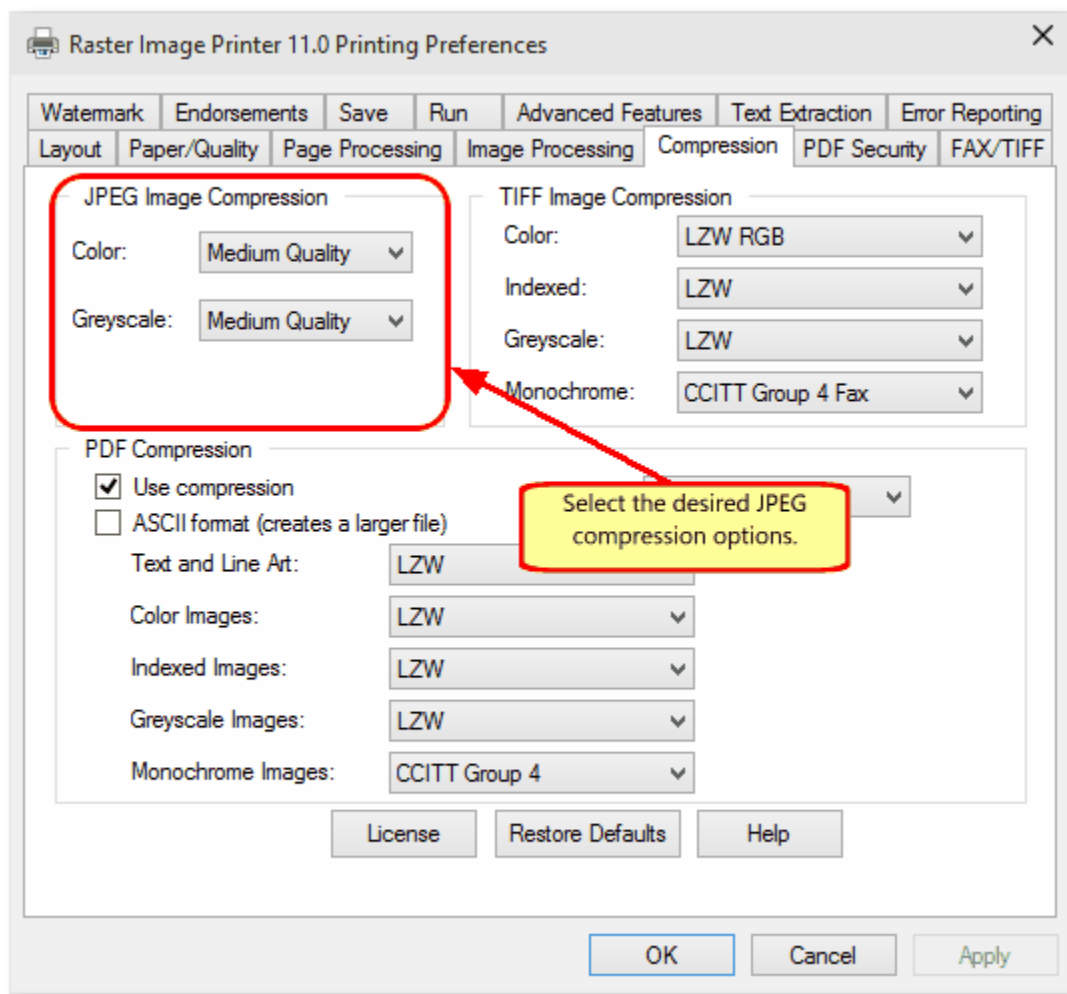
- In the *JPEG Image Compression* section choose the level of compression to use for *Color* and *Greyscale* JPEG images. *High Quality* will result in a better looking JPEG image but also

creates a larger file. A lower quality image will take less disk space to store, but a higher quality image will look better.

3. Click the Apply button and then the OK button to set the changes.

4. Printing to Raster Image Printer from any application to create a JPEG image will now use the compression methods chosen to compress the file.

About JPEG Compression Methods

JPEG compression is set at Medium Quality by default. When changing compression methods, take care to note any *Color Reduction* settings on the Save tab or any *Color* set on the Paper/Quality tab as these properties determine the color model of the JPEG image.

> **Low, Medium and High JPEG and the JPEG Quality Factor**
>
> When using JPEG compression, a *quality setting*, or *Q factor* is often used to determine the quality and level of compression.
>
> With JPEG compression, which is a lossy compression algorithm, a higher quality factor produces a better image but a larger file. A lower quality factor will produce a smaller file but the image quality can be degraded.
>
> The *Q factor* used by Raster Image Printer is a range of 1 to 100 with the individual compression levels set at follows:
>
> - JPEG Low Quality uses a Q Factor of 30
> - JPEG Medium Quality uses a Q Factor of 75
> - JPEG High Quality uses a Q Factor of 85 (100 for grey or indexed compression)

Image Color Model	Compression Methods	Used When...

Color Images	• Low Quality JPG
	• Medium Quality JPG
	• High Quality JPG
		• Color is chosen on the Paper/Quality tab and
		  ▪ Color Reduction on the Save tab is set to Reduce to optimal and there are more than 256 colors in the document
		  ▪ Color Reduction on the Save tab is set to None

Greyscale Images	• Low Quality JPG
	• Medium Quality JPG
	• High Quality JPG
		• Color is chosen on the Paper/Quality tab and
		  ▪ Color Reduction on the Save tab is set to Reduce to optimal and there are only greyscale colors in the document
		  ▪ Color Reduction on the Save tab is set to Reduce to greyscale

TIFF Compression

All of the TIFF image compression options are controlled through the *Compression* tab in the `Printing Preferences` dialog.

Close any open applications that you are printing from before making changes as not all applications will see your changes until they are re-started.

Changing the compression methods using the following steps is a global change, meaning that all applications will use these options when printing to Raster Image Printer.

Step by Step Instructions

1. From the `Start` menu, go to `All Programs - Raster Image Printer 11.0 - Properties...`

2. Click the *Compression* tab in the `Printing Preferences` dialog.
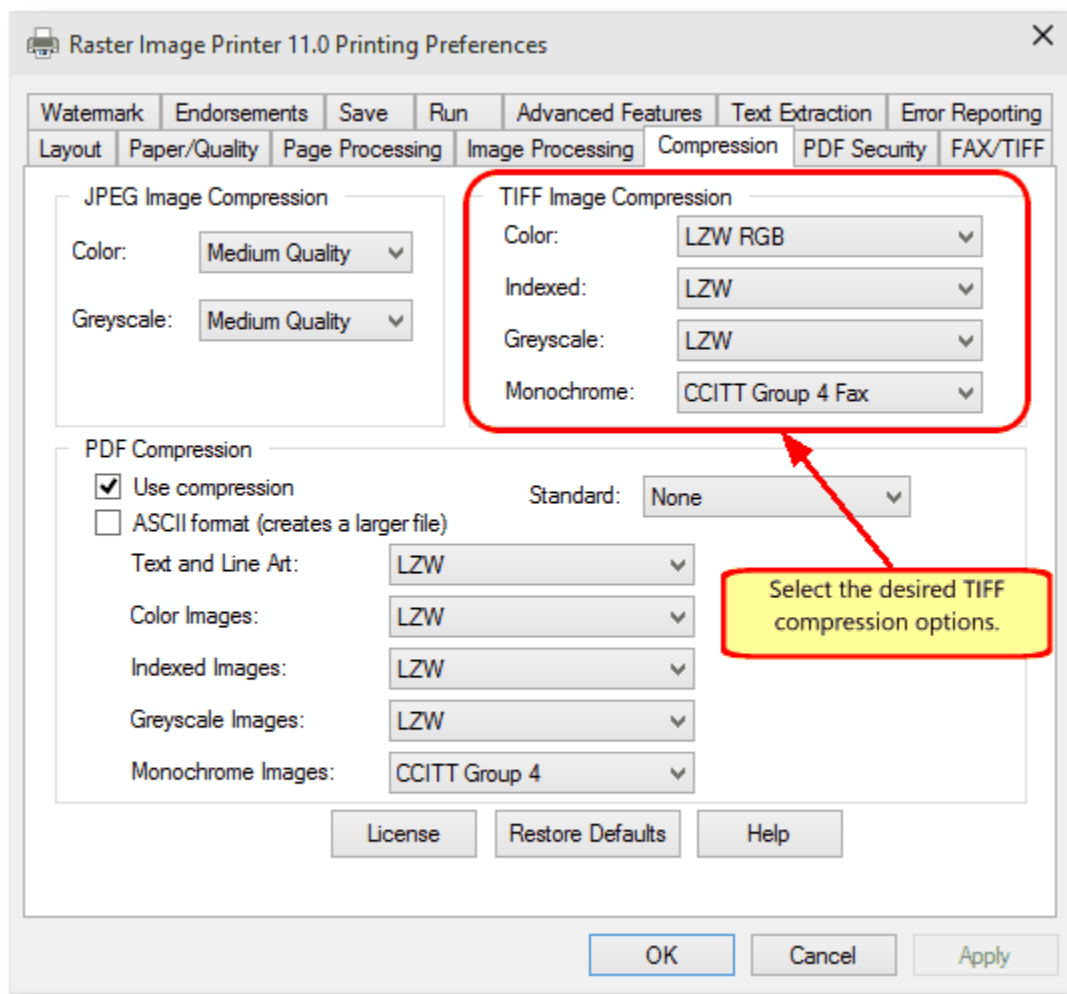
*   In the *TIFF Image Compression* section, change the compression method to use for each color model of TIFF image as desired.

3. Click the Apply button and then the OK button to set the changes.

4. Printing to Raster Image Printer from any application will now use the compression methods chosen, if any, to compress the file.

About the TIFF Compression Methods

The default compression methods chosen by Raster Image Printer upon install will often give the smallest TIFF image. When changing compression methods, take care to note any *Color Reduction* settings on the Save tab or any *Color* set on the Paper/Quality tab as these properties determine the color model of the TIFF image. Changing the compression method for *Color Images* to Medium Quality JPG when printing in *Black and White* or with *Color Reduction* set to *Reduce to black and white* will have no effect on the resulting black and white TIFF image.

> 💡 **Low, Medium and High JPEG and the JPEG Quality Factor**
>
> When using JPEG compression, a *quality setting*, or *Q factor* is often used to determine the quality and level of compression.
>
> With JPEG compression, which is a lossy compression algorithm, a higher quality factor produces a better image but a larger file. A lower quality factor will produce a smaller file but the image quality can be degraded.
>
> The *Q factor* used by Raster Image Printer is a range of 1 to 100 with the individual compression levels set at follows:
>
> - JPEG Low Quality uses a Q Factor of 30
> - JPEG Medium Quality uses a Q Factor of 75
> - JPEG High Quality uses a Q Factor of 85 (100 for grey or indexed compression)

Image Color Model	Compression Methods	Used When...

Color Images	• Uncompressed RGB
	• Uncompressed CMYK
	• Low Quality JPG
	• Medium Quality JPG
	• High Quality JPG
	• Packbits RGB
	• Packbits CMYK
	• LZW RGB
	• LZW CMYK
		• Color is chosen on the Paper/Quality tab and
		  ▪ Color Reduction on the Save tab is set to Reduce to optimal and there are more than 256 colors in the document
		  ▪ Color Reduction on the Save tab is set to None

Indexed Images	• Low Quality JPG • Medium Quality JPG • High Quality JPG • Packbits • LZW • None	• Color is chosen on the Paper/Quality tab and ▪ Color Reduction on the Save tab is set to Reduce to optimal and there is less than 256 colors in the document
Greyscale Images	• Low Quality JPG • Medium Quality JPG • High Quality JPG • Packbits • LZW	• Color is chosen on the Paper/Quality tab and

Image Color Model	Compression Methods	Used When...
	• None	▪ Color Reduction on the [Save](#) tab is set to Reduce to optimal and there are only greyscale colors in the document ▪ Color Reduction on the [Save](#) tab is set to Reduce to greyscale

Monochrome Images	• CCITT Group 4 Fax
	• CCITT Group 3 2D Fax
	• CCITT Group 3 1D Fax
	• CCITT Modified Huffman
	• None
		• Black & White is chosen on the [Paper/Quality](#) tab
		• Color is set on the [Paper/Quality](#) tab and
		  ▪ Color Reduction on the [Save](#) tab is set to Reduce to optimal and there are only 2 colors, black and white, in the document
		  ▪ Color Reduction on the [Save](#) tab is set to Reduce to black and white
		• Fax mode is enabled on the [FAX/TIFF](#) tab.

⚠️ **CMYK Compression and Viewing TIFF Images**

Not all image viewers understand CMYK compression, and as a result, may not display the TIFF image correctly. For example, *Microsoft Document Imaging* is known to have this problem, while *Windows Photo Gallery* (on Vista) or *Windows Picture and Fax Viewer* (on XP) do display the TIFF correctly.

PDF Compression

Raster Image Printer creates *non-searchable*, or *image only* PDF files. A non-searchable PDF file is a series of one or more images wrapped in a PDF document. This type of file is useful in cases where you don't want the information in the document to be easily copied or altered. A non-searchable PDF file is not guaranteed to be fully copy-proof but it is one more step towards protecting your document. PDF files can also be created that are PDF/A-1b compliant.

As each page inside the PDF file is an image, Raster Image Printer has several different compression options that are used to *compress*, or *shrink,* the images in the document so that the file takes up less space on your hard drive.

All of the PDF compression options are controlled through the *Compression* tab in the Printing Preferences dialog. Close any open applications that you will be printing from before making changes as not all applications will see your changes until they are re-started.

Modifying the compression methods using the following steps is a global change, meaning that all applications will use these options when printing to Raster Image Printer.

Step by Step Instructions

1. From the Start menu, go to All Programs - Raster Image Printer 11.0 - Properties...

2. Click the *Compression* tab in the Printing Preferences dialog.
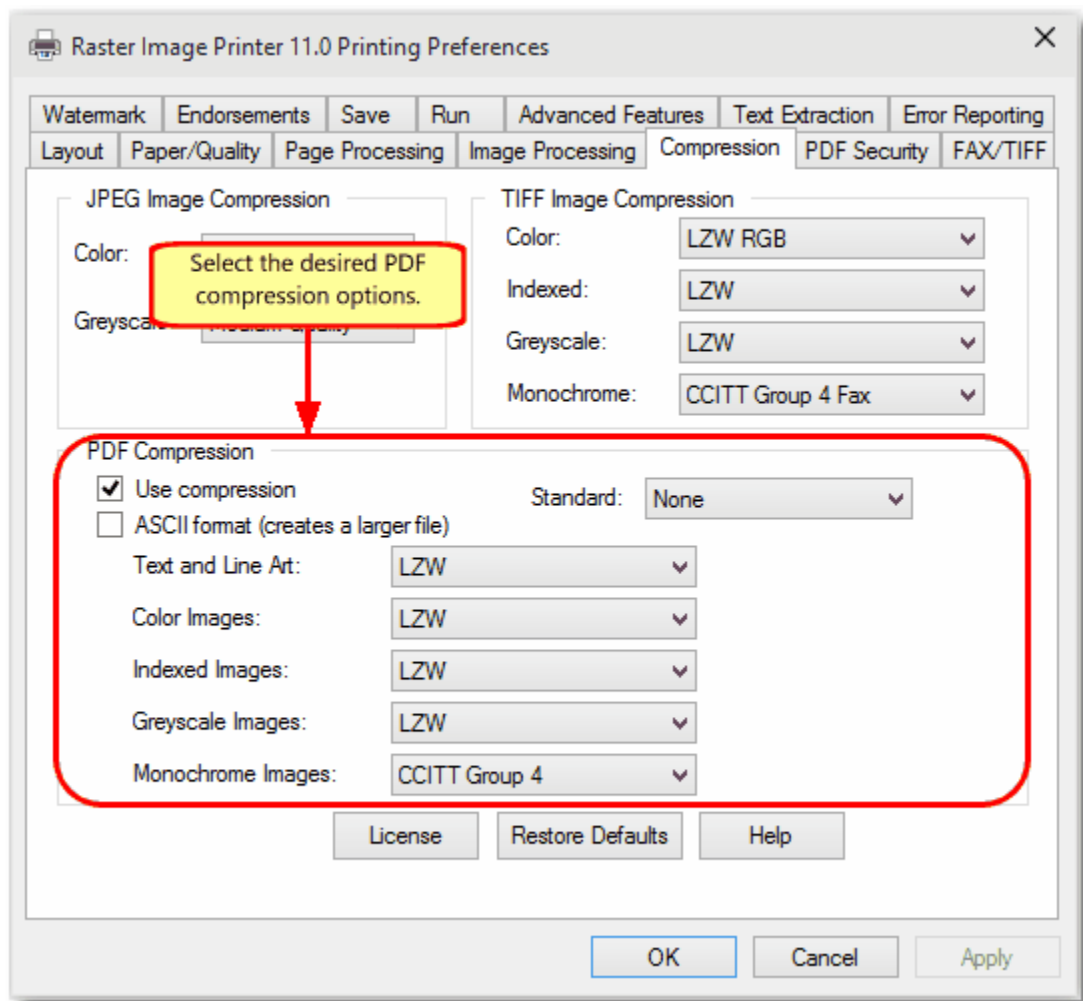
- Leave *Standard* to None or change it to PDF/A-1b to create a PDF/A-1b compliant PDF file.

- In the *PDF Compression* section, change the compression method to use for each color model of PDF page as desired.

3. Click the Apply button and then the OK button to set the changes.

4. Printing to Raster Image Printer from any application will now use the compression methods chosen to compress the pages in the file.

PDF/A-1b Compliance

A PDF file created with PDF/A-1b compliance is meant for long-term archiving of electronic documents and ensures that the document is visually correct. When creating a PDF/A-1b compliant JPG image, all PDF security options are automatically ignored and any LZW compression is replaced with ZIP compression.

About PDF Compression Methods

By default, Compression is enabled for all PDF files created. Turning the compression options off will

increase the size of your document.

The ASCII format compression option creates a 7-bit compressed PDF file; this option is rarely needed anymore and is only included for compatibility with older networks and e-mail systems. Leave this option unchecked to create an 8-bit compressed document.

The default compression methods chosen by Raster Image Printer upon install will often give the smallest file. When changing compression methods, take care to note any *Color Reduction* settings on the Save tab or the *Color* option setting on the Paper/Quality tab as these properties determine the color model of the file. Changing the compression method for *Color Images* to Medium Quality JPG when printing in *Black and White* or with *Color Reduction* set to *Reduce to black and white* will have no effect on the resulting black and white JPG image.

> **Low, Medium and High JPEG and the JPEG Quality Factor**
>
> When using JPEG compression, a *quality setting*, or *Q factor* is often used to determine the quality and level of compression.
>
> With JPEG compression, which is a lossy compression algorithm, a higher quality factor produces a better image but a larger file. A lower quality factor will produce a smaller file but the image quality can be degraded.
>
> The *Q factor* used by Raster Image Printer is a range of 1 to 100 with the individual compression levels set at follows:
>
> - JPEG Low Quality uses a Q Factor of 30
> - JPEG Medium Quality uses a Q Factor of 75
> - JPEG High Quality uses a Q Factor of 85 (100 for grey or indexed compression)

Image Color Model	Compression Methods	Used When...
Text and Line Art	• None • Run Length • Zip • LZW	• Always when selected; not affected by the color mode.

Color Images	• None
	• Low Quality JPG
	• Medium Quality JPG
	• High Quality JPG
	• Run Length
	• LZW
		• Color is chosen on the Paper/Quality tab and
		  ▪ Color Reduction on the Save tab is set to Reduce to optimal and there are more than 256 colors in the document
		  ▪ Color Reduction on the Save tab is set to None

Indexed Images	• None • Low Quality JPG • Medium Quality JPG • High Quality JPG • Run Length • LZW	• Color is chosen on the Paper/Quality tab and ▪ Color Reduction on the Save tab is set to Reduce to optimal and there is less than 256 colors in the document
Greyscale Images	• None • Low Quality JPG • Medium Quality JPG • High Quality JPG	• Color is chosen on the Paper/Quality tab and

Image Color Model	Compression Methods	Used When...
	• Run Length • LZW	▪ Color Reduction on the Save tab is set to Reduce to optimal and there are only greyscale colors in the document ▪ Color Reduction on the Save tab is set to Reduce to greyscale

Monochrome Images	• None
	• CCITT Group 3 1D
	• CCITT Group 3 2D
	• CCITT Group 4
		• Black & White is chosen on the Paper/Quality tab
		• Color is set on the Paper/Quality tab and
		  ▪ Color Reduction on the Save tab is set to Reduce to optimal and there are only 2 colors, black and white, in the document
		  ▪ Color Reduction on the Save tab is set to Reduce to black and white
		• Fax mode is enabled on the FAX/TIFF tab.

Automatically Splitting Files

When creating multipaged output the files created can be automatically split into a sequence of smaller files using one or both of the following criteria:

- split the file based on a page count

- split the file as soon as it exceeds a size threshold

If both file splitting options are enabled, the file will be split at the first condition that is met. File splitting only applies to the following multipaged file formats:

- TIFF Multipaged - TIFF Multipaged (*.tif)

- Adobe PDF Multipaged - Adobe PDF Multipaged (*.pdf)

- ZSoft DCX - ZSoft DCX (*.dcx)

When file splitting is enabled the serialized naming profile is always used to name each file in the sequence. For example, printing a 15 page report from an invoice database to a multipaged TIFF image and setting the file splitting page count to 5 pages will result in 3 output files, each with 5 pages, named as follows:

- Invoice_001.tif

- Invoice_002.tif

- Invoice_003.tif

Step by Step Instructions

Changing the file splitting options using the following steps is a global change, meaning that all applications will use these options when printing to Raster Image Printer.

The following steps demonstrate setting the file splitting to occur when there are 100 pages in the file, or if the size of the file exceeds 10MB.

1. From the Windows Start menu, go to All Programs - Raster Image Printer 11.0 - Properties…

2. Click on the *Save* tab in the Printing Preferences dialog.

- In the *Output Directory* field, type in the folder where you want to save your output files. You can also use the Browse… button to find a folder on your computer. If the field is left blank, the Documents folder is used by default.

- Leave the *Filename* field blank to have Raster Image Printer use the name submitted by the application when the file is printed as the output file name. If you specify a filename, and have the *Overwrite always* option checked, each print will overwrite the previous file.

- Click the *Split after* check box to enable file splitting by size and type in the file size threshold in megabyes (MB) to use. The file will be split *after* this size is exceeded.

- Click the *Split every* check box to enable file splitting by page count and type in the maximum number of pages you want per file..

3. Click the Apply button and then the OK button to set the changes. If the output directory you typed in does not exist, you will be prompted to confirm creation of the new directory.

4. Printing to Raster Image Printer from any application now saves the output files into the chosen directory, split into sequenced files. Each file in the sequence is no more than 100 pages or just larger than 10MB..

Setting PDF Security Options

PDF files can be created with or without security. Creating a secure PDF file allows you to restrict what can be done with the contents of the file. For instance, you can allow people to read and print the file but not be able to copy any of the text or images out of the file. Common security options include file encryption, file permissions and password protection.

See the following sections for information:

- ➢ [Encryption Levels](#)
- ➢ [File Permissions](#)
- ➢ [Password Security](#)

Setting PDF Security

All of the PDF security settings are controlled through the *PDF Security* tab in the Printing Preferences dialog. Close any open applications that you will be printing from before making changes as not all applications will see your changes until they are re-started. Changing the security settings using the following steps is a global change, meaning that all applications will use these options when printing to Raster Image Printer.

Step by Step Instructions

The steps below will set the security options for creating a 128-bit encrypted PDF that allows only printing and copying of file contents and requires a password to be entered to open the document.
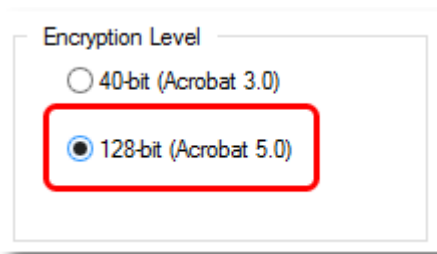
1. From the Start menu, go to All Programs - Raster Image Printer 11.0 - Properties...

2. Click the *PDF Security* tab in the Printing Preferences dialog.

Raster Image Printer
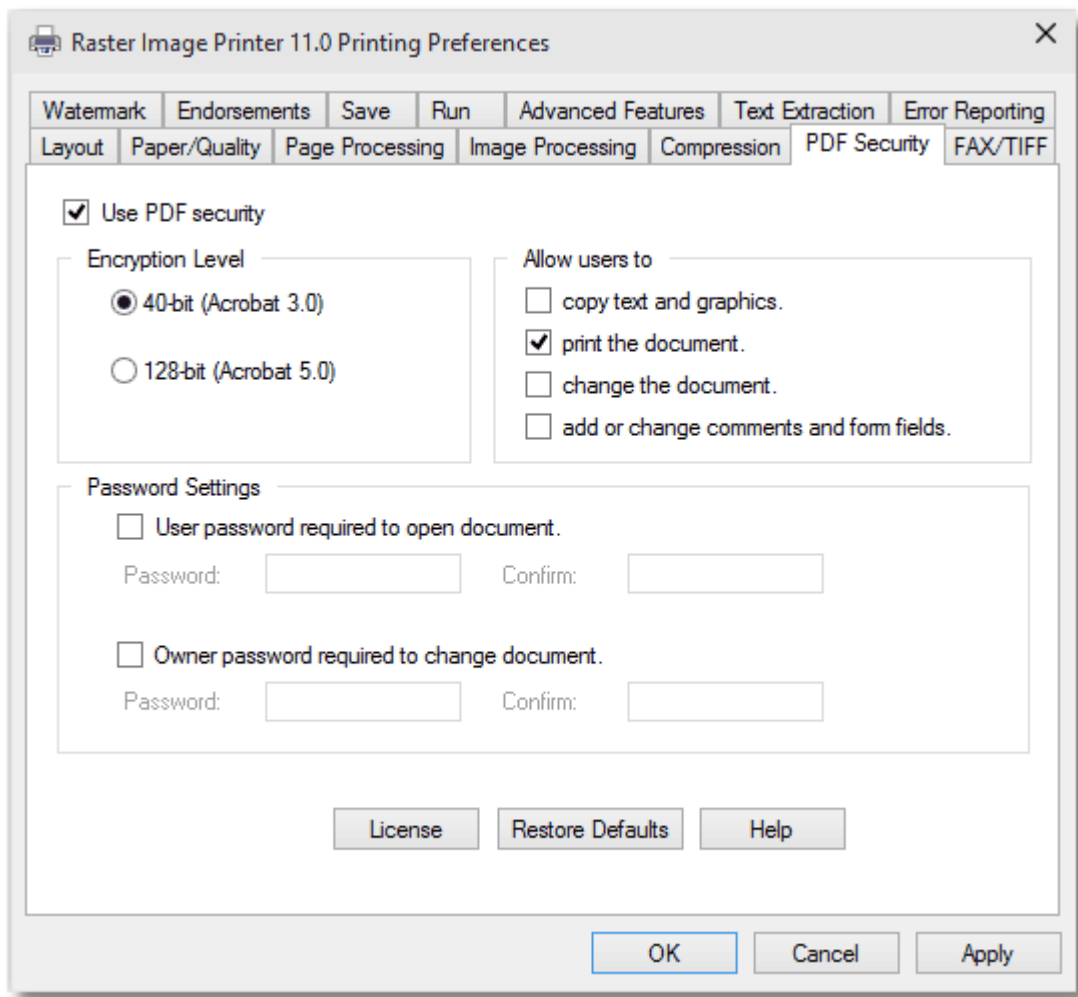
3. Enable the *Use PDF security* option.
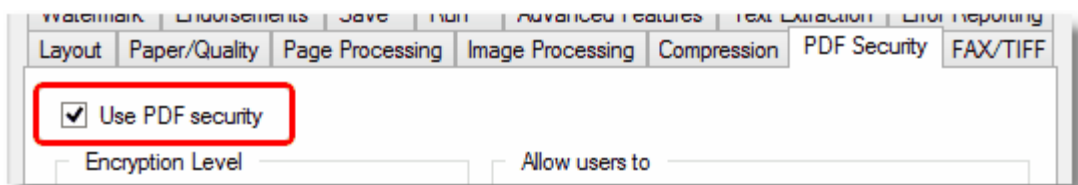
4. Change the *Encryption Level* to use **128-bit** encryption. If you need to support older versions of Acrobat and Adobe Reader, set the *Encryption Level* to **40-bit.**
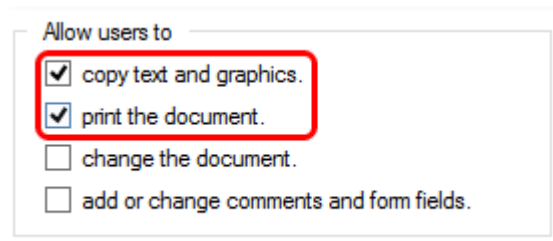
5. In the *Allow users to* section, enable the *copy text and graphics* and *print the document* options. Leave the other options unchecked.
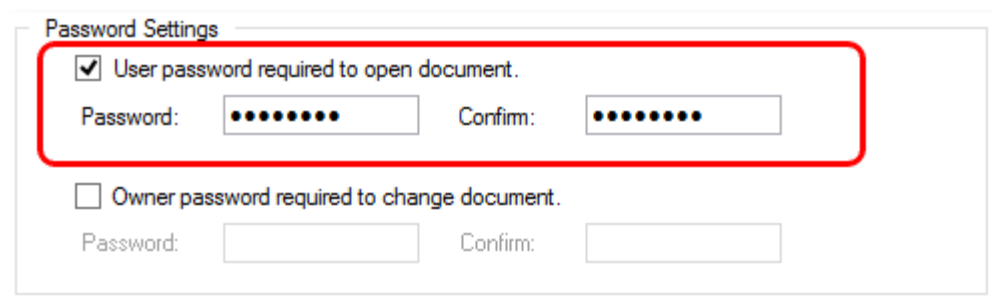
6. In the *Password Settings* section, check the *User password required to open document option*, and enter in the password in both the *Password* and *Confirm* text fields. The password entered must match in both fields. You will not see the password as you type as a placeholder, usually a circle (•) or an asterisk (*), is shown for each character as you type so that your password is kept secure.

7. Click the Apply button and then the OK button to set the changes.

8. Printing to Raster Image Printer from any application will now use the security settings to create a 128-bit encrypted file that requires a password to open. Once open, the PDF file can be printed and any text and graphics in the file can be copied and pasted but the PDF contents cannot be changed, meaning pages cannot be added or deleted.

PDF Encryption Levels

A secure PDF file is encrypted with one of two following encryption levels. The encryption level chosen will determine what version of Acrobat or Adobe Reader is required to view the PDF file.

Encryption Level	Adobe / Acrobat Reader
40-bit	Can be opened by version 3.0 or later

Encryption Level	Adobe / Acrobat Reader
128-bit	Can be opened by version 5.0 or later

PDF Permissions

Depending on what you want viewers to be able to do with the PDF file you create, different permissions can be set to restrict what can and cannot be done.

If you want to your viewers to be able to…	Check this permission option
Select and copy the contents, such as text	Allow text and graphics copying
Print the PDF	Allow document printing
Change the PDF - this includes inserting, deleting and rotating pages, adding or editing form fields, and document signing	Allow document changes
Add and edit form fields and comments only; pages cannot be added or removed.	Allow adding or editing form fields and comments.

PDF Password Security

There are two levels of password protection that can be set:

- one for opening the PDF, also known as the document open password

- one for making changes or modifying the PDF, also called the permissions password

If the document open password is set, anyone opening the PDF will have to type in the password you specify. With the permission password set, this password is needed to change the security settings or to modify permissions on the document, such as whether content copying or form field editing is allowed.

If both passwords are set, either password will open the PDF file, but only the permissions password will allow you to change the permissions on the PDF.

Password Recovery
There is no way to recover a password from a PDF document. Store your passwords in a safe place, or keep a non-password protected copy of the file as back-up in case you forget the passwords.

Creating Fax Format Files

Raster Image Printer can create images and files that can be used by fax software or a hardware fax board on your computer. Not all of the supported file types that Raster Image Printer can create are natively faxable. If you need to create a file that can be faxed, the best output format is TIFF, followed closely by PDF. All of the supported file types can, however, create files that restricted to fax paper size and fax resolutions.

See the following sections for step-by-step guides to creating fax format images and files.

- ➢ [Creating Monochrome Fax](#)
- ➢ [Creating Color Fax](#)
- ➢ [Changing the Fax Compression](#)

Fax Compression

When creating Profile F format TIFF or PDF files the compression method used will depend on the setting for *Monochrome Images:* on the [Compression](#) tab. If the current compression mode setting does not match one of the supported compression methods for that fax profile, the default compression method for that fax profile is used instead.

Profile	Allowed	Default
Profile F	CCITT Group 4 Fax CCITT Group 3 2D Fax CCITT Group 3 1D Fax	CCITT Group 4 Fax
Profile S	CCITT Group 3 1D Fax	CCITT Group 3 1D Fax
Profile C	JPEG	JPEG

Viewing Fax Images

Most image viewers will be able to display Profile F and Profile S fax images correctly. Profile C fax images are viewable but may display the image with a blue or green color tint. This is normal as most image viewers do not understand the *ITU L*a*b* color model required by the FAX standard. A Profile C fax will appear correct when printed by a fax machine that supports color fax images.

A non-faxable color TIFF image stores the image information using the *YCbCr* color model while a faxable TIFF image (Profile C) stores the image information using the *ITU L*a*b* color model. Most image viewers today display TIFF images as if they were created using the YCbCr color model. Trying to display a color fax image using the YCbCr color model is what causes the images to have the blue or green color tint.

> 💡 The type of faxable image you will need to create will depend on the requirements of your faxing software or hardware; TIFF images are among the most commonly used formats. Check the documentation that came with your faxing software or hardware to see its specifications.

Creating Monochrome Fax

Fax images are most often created as monochrome, or 1-bit TIFF images. The following steps will walk you through creating a faxable black and white TIFF image.

All of the other supported file formats that can be created by Raster Image Printer can also create monochrome fax-format images, with the exceptions of JPEG (*.jpg) and TARGA (*.tga) images. Please note that while some of the file formats can be created with the necessary fax paper size and fax resolutions they may not natively be able to be faxed.

Step by Step Instructions

1. Open the document you want to convert into a faxable TIFF image.

2. Select File - Print from your application.
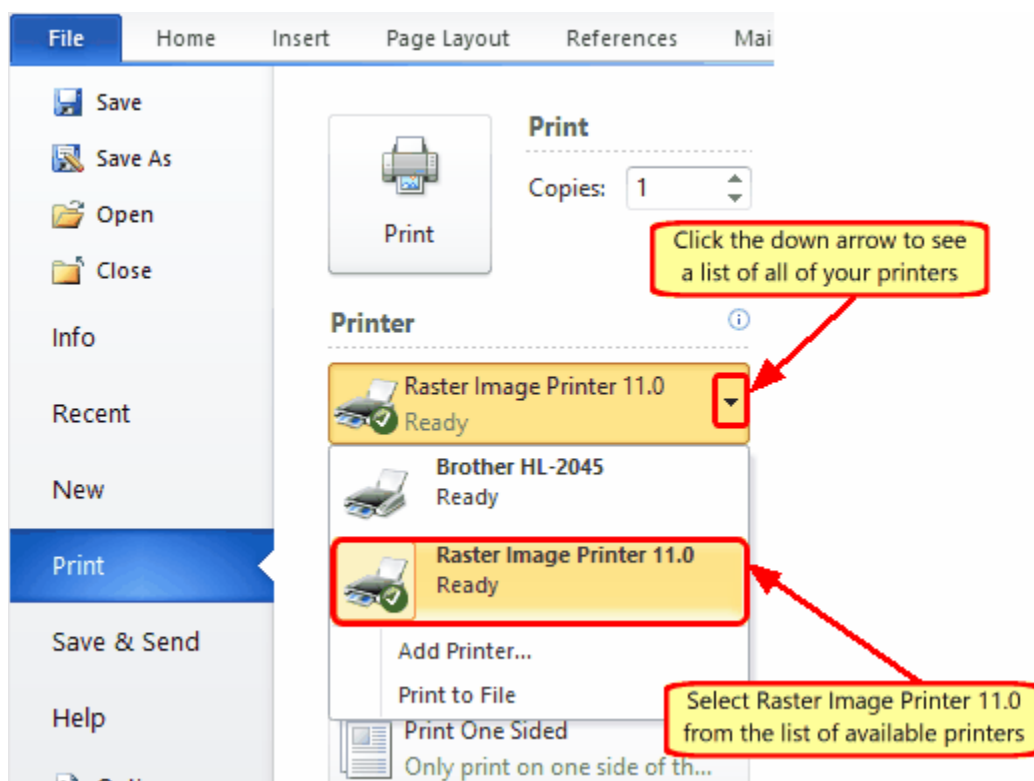
- In the printer field choose the Raster Image Printer 11.0 from the drop-down list of printers.

- Click the Properties… button to open the Raster Image Printer properties dialog box.
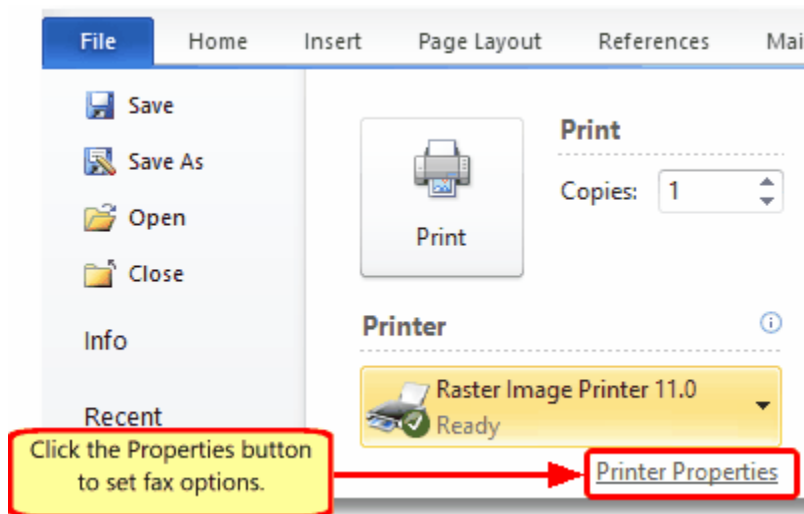
3. Select the *FAX/TIFF* tab in the Document Properties dialog to access the fax settings.
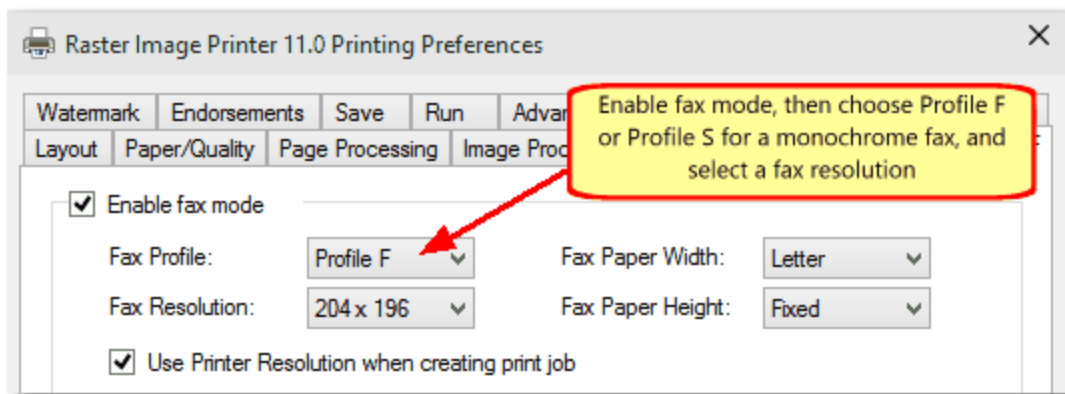
*   Enable fax settings by checking the *Enable fax mode* check box.

*   In the *Fax Profile* drop-down list, choose either **Profile F** or **Profile S** to create a monochrome fax image.

*   In the *Fax Resolution* drop-down list, choose the desired fax resolution. Profile S is a simplified fax format and only supports a small selection of resolutions. Profile F offers more choices. Common fax resolutions are *200x200*, *204x196* and *204x98*.

*   The remaining options can be left as they are for now. You are encouraged to play with these options at your convenience. See the FAX/TIFF tab in the *Properties Reference* section for more details.

4. Click the OK button on the Document Properties dialog to save the changes to the fax options.

5. Click the OK button on the Print dialog (or the appropriate button on your application's print dialog) to send the document to the printer.

6. Choose where to save your TIFF image using the Save Image File dialog.

- Use the *Save in:* field to choose a folder to store your TIFF image. Your **Documents** folder will be selected for you by default.

- In the *File name:* field, enter a name for your TIFF image. A default name for your image will have been filled in based on the name your application used when it printed your document to the Raster Image Printer; here we have changed it to **FaxTIFF**.

- In the *Save as type:* drop down list select **TIFF Multipaged (*.tif)** to create a multipage fax format TIFF image. This can be changed to **TIFF Serialized (*.tif)** if serialized, single page TIFF images are needed.

- Click the Save button to create the image. The image will be created in the folder you chose.

Creating Color Fax

Many newer fax machines now support color faxing as well as black and white. The following steps will walk you through creating a faxable color TIFF image.

All of the other supported file formats that can be created by Raster Image Printer can also create color fax-format images. Please note that while some of the file formats can be created with the necessary fax paper size and fax resolutions they may not natively be able to be faxed.

Step by Step Instructions

1. Open the document you want to convert into a faxable TIFF image.

2. Select `File - Print` from your application.
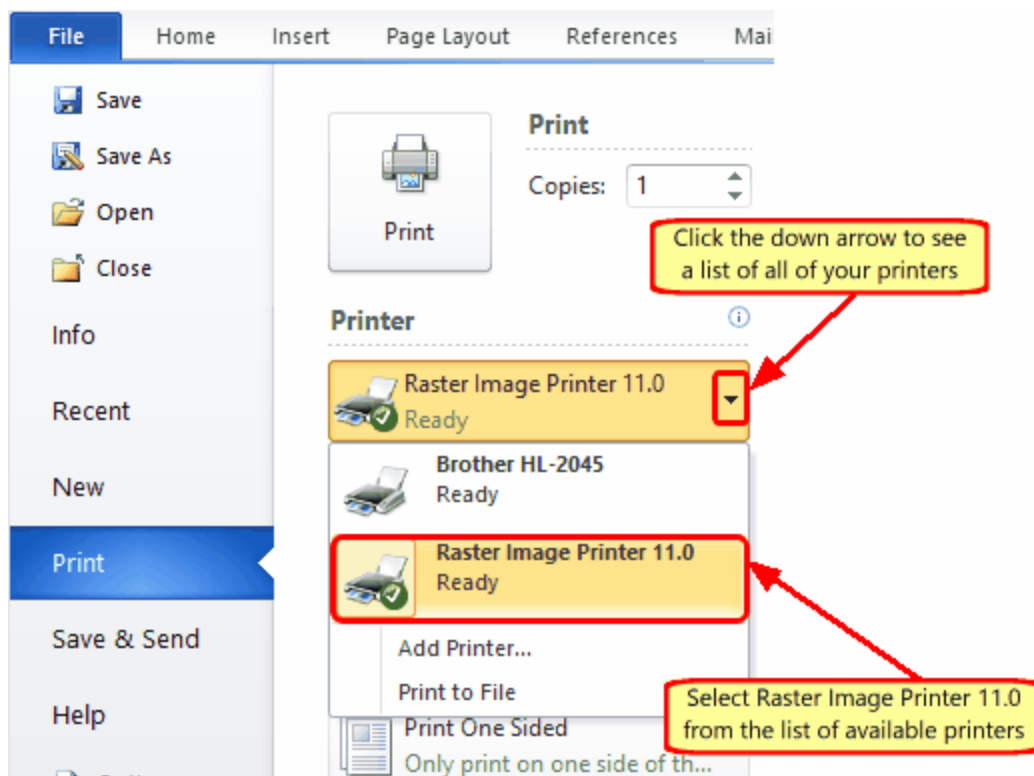
- In the printer field choose the Raster Image Printer 11.0 from the drop-down list of printers.

- Click the `Properties...` button to open the Raster Image Printer properties dialog box.

3. Click on the *FAX/TIFF* tab in the Document Properties dialog to access the fax settings.
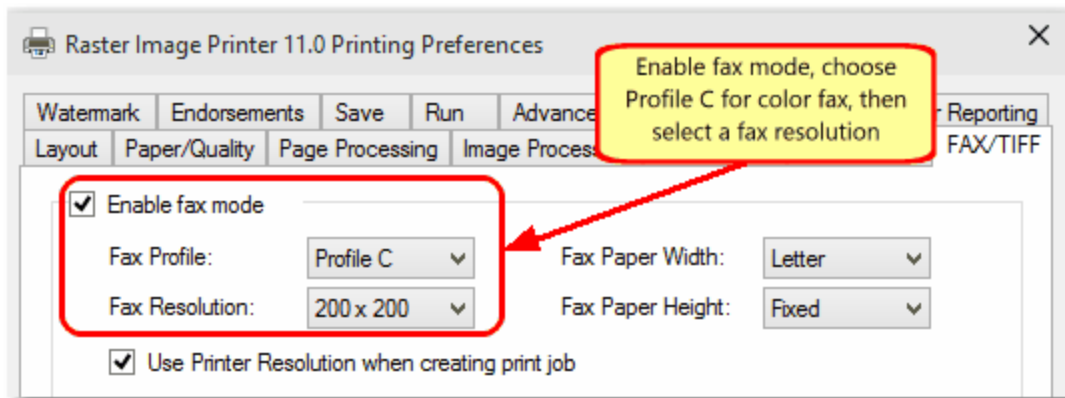
* Enable fax settings by checking the *Enable fax mode* check box

* In the *Fax Profile* drop-down list, choose **Profile C** for color fax images.

* In the *Fax Resolution* drop-down list, choose the desired fax resolution. Profile C offers resolutions ranging from *100x100* up to *1200x1200*. A common fax resolution that is a good balance between quality and size is *200x200*.

* The remaining options can be left as they are for now. You are encouraged to play with these options at your convenience. See the FAX/TIFF tab in the *Properties Reference* section for more details.

4. Click the OK button on the Document Properties dialog to save the changes to the fax options.

5. Click the OK button on the Print dialog (or the appropriate button on your application's print dialog) to send the document to the printer.

6. Choose where to save your TIFF image using the Save Image File dialog.

- Use the *Save in:* field to choose a folder to store your TIFF image. Your **Documents** folder will be selected for you by default.

- In the *File name:* field, enter a name for your TIFF image. A default name for your image has been filled in based on the name your application used when it printed your document to the Raster Image Printer; here we have changed it to **ColorFaxTIFF**.

- In the *Save as type:* drop down list select **TIFF Multipaged (*.tif)** to create a multipage fax format TIFF image. This can be changed to **TIFF Serialized (*.tif)** if serialized, single page TIFF images are needed.

- Click the Save button to create the image. The image will be created in the folder you chose.

Changing the Fax Compression

The compression used in your fax image can only be changed for Profile F fax images. The selected compression method in the *Monochrome Images:* drop down list on the tab determines the compression method. If the current setting is not applicable the default compression setting for that fax profile will be used instead. JPEG files will use the compression selected for JPEG, while TIFF and PDF each use the compression method chosen in their respective Monochrome drop down list on the Compression tab for their compression settings. Compression settings cannot be changed for the other output formats.

Step by Step Instructions

1. Open the document you want to convert into a faxable file.

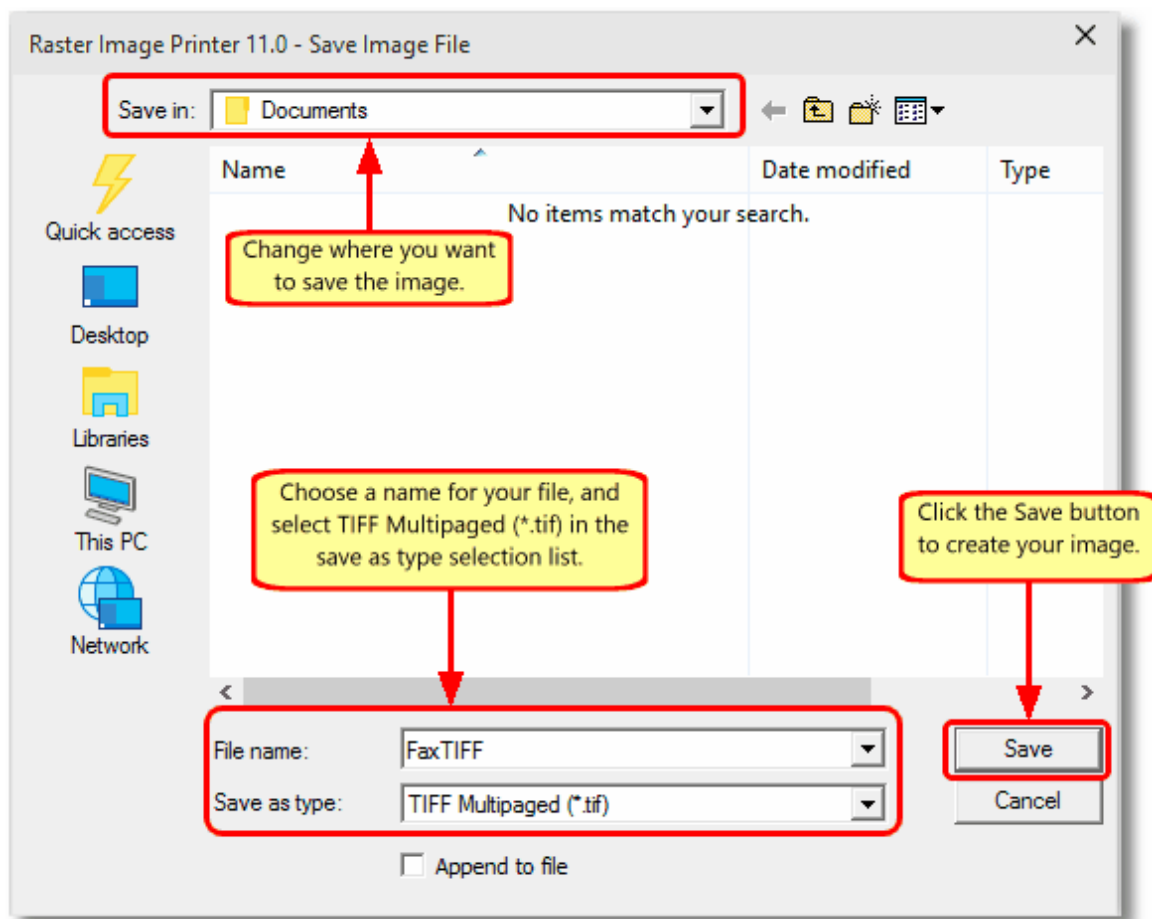2. Select `File - Print` from your application.
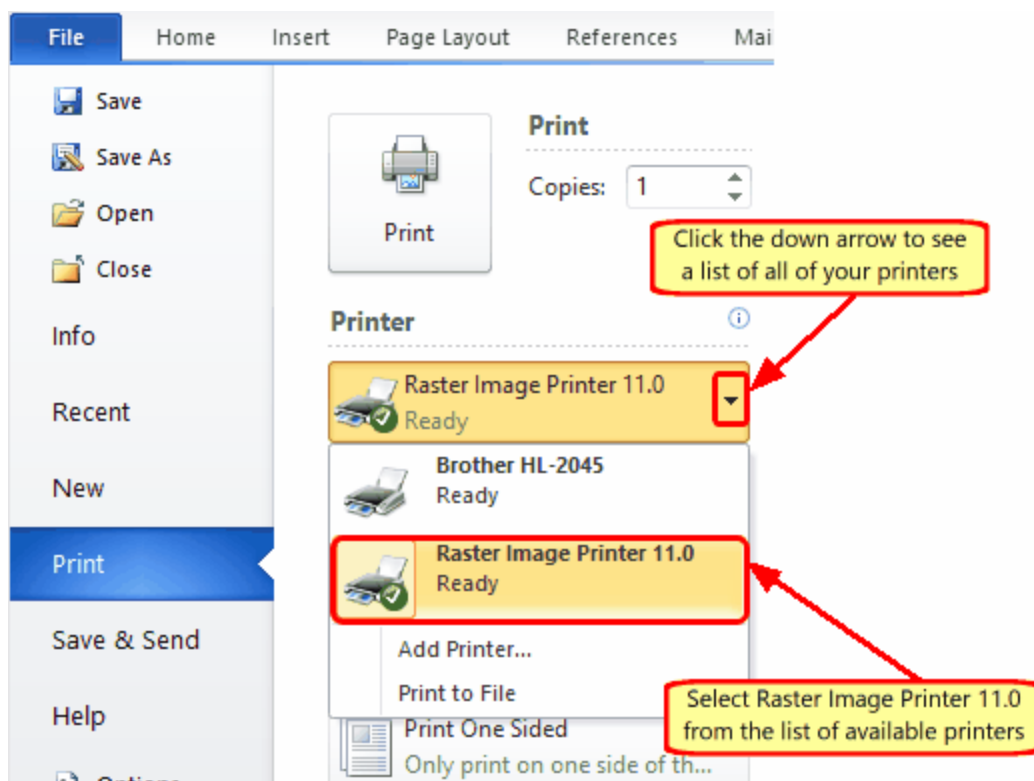
- In the printer field choose the Raster Image Printer 11.0 from the drop-down list of printers.

- Click the `Properties...` button to open the Raster Image Printer properties dialog box.

Click the Properties button to set fax options.
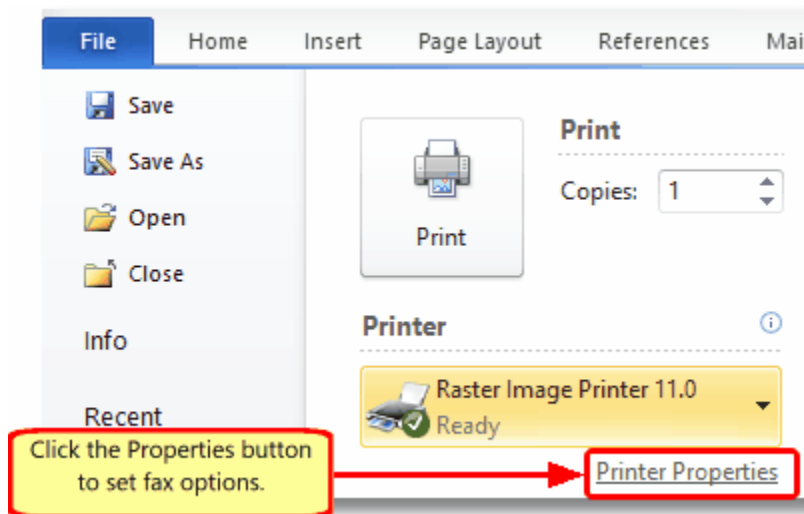
3. Click on the *FAX/TIFF* tab in the Document Properties dialog to access the fax settings.
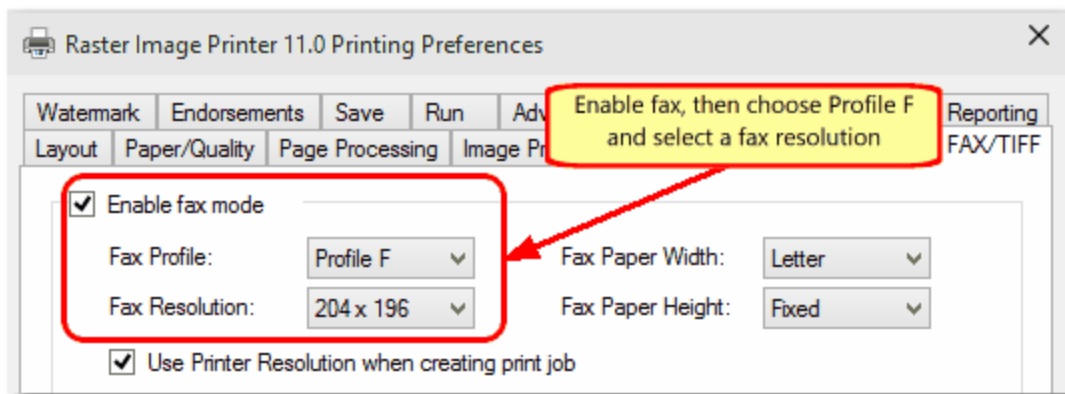
- In the *Fax Profile* drop-down list, choose **Profile F**.

- In the *Fax Resolution* drop-down list, choose the desired fax resolution. Common fax resolutions are *200x200*, *204x196* and *204x98*.

- The remaining options can be left as they are for now. You are encouraged to play with these options at your convenience. See the FAX/TIFF tab in the *Properties Reference* section for more details.

4. Click on the *Compression* tab in the Document Properties dialog to access the compression options.
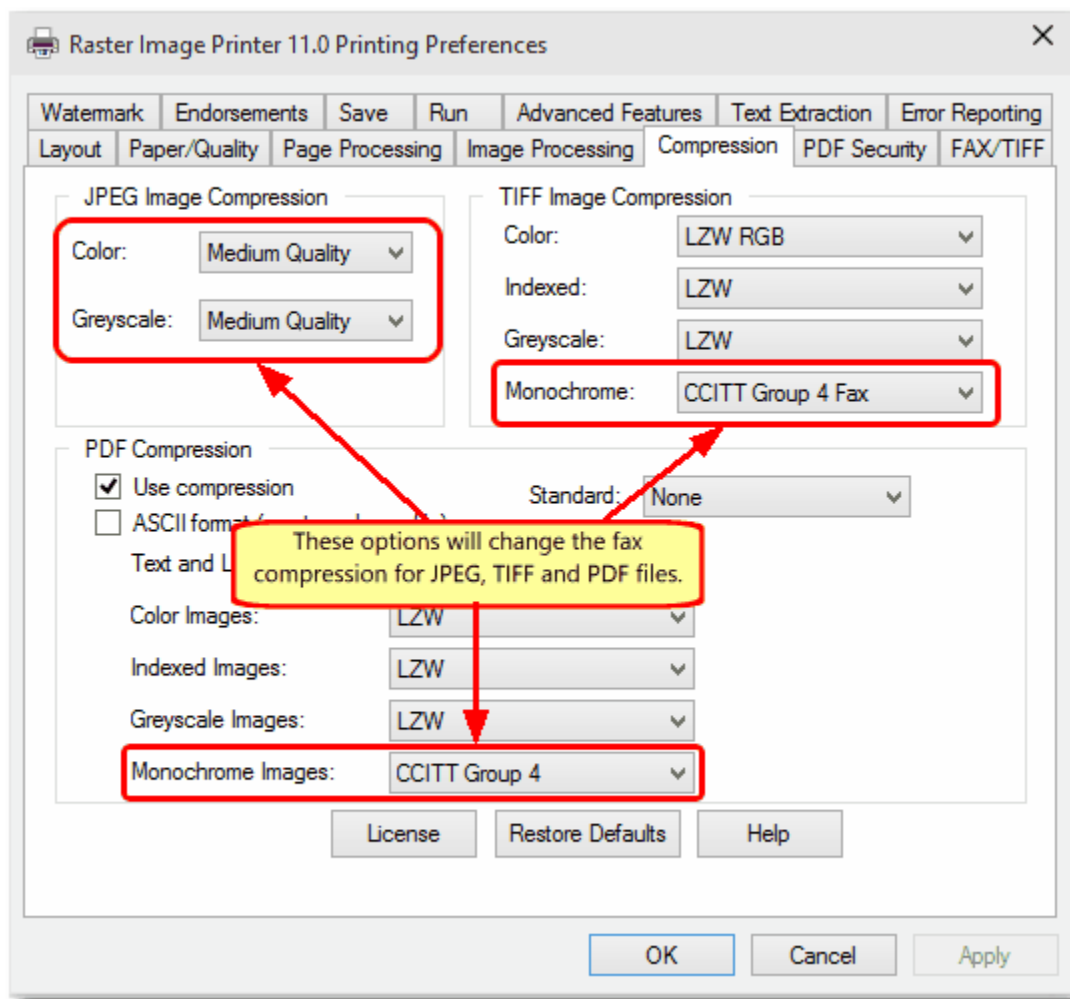
- Change the compression settings for the file type you are creating.

5. Click the OK button on the Document Properties dialog to save the changes to the fax and compression options.

6. Click the OK button on the Print dialog (or the appropriate button on your application's print dialog) to send the document to the printer.

7. Choose where to save your file using the Save Image File dialog.
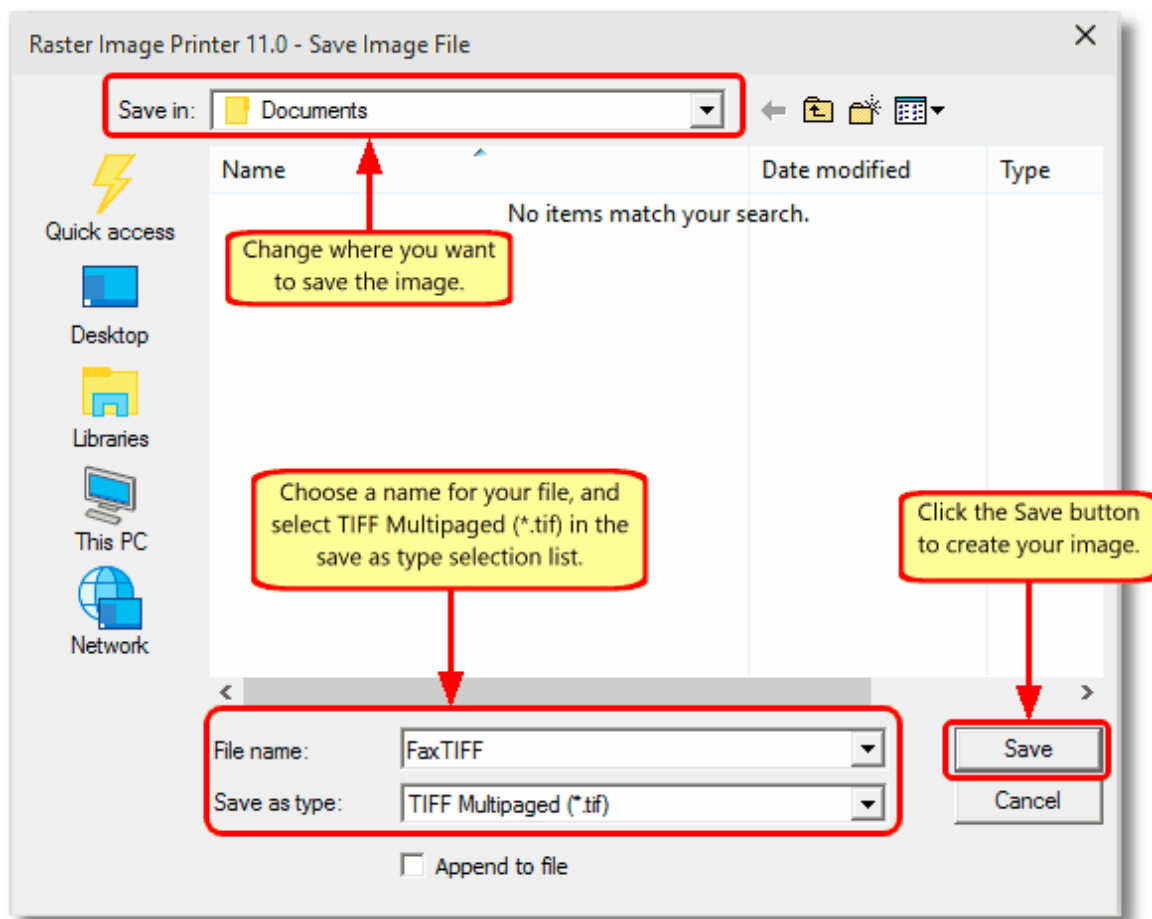
- Use the *Save in:* field to choose a folder to store your file. Your **Documents** folder will be selected for you by default.

- In the *File name:* field, enter a name for your file. A default name for your image has been filled in based on the name your application used when it printed your document to the Raster Image Printer; here we have changed it to **FaxTIFF**.

- In the *Save as type:* drop down list select **TIFF Multipaged (*.tif)** to create a multipage fax format TIFF image. This can be changed to **TIFF Serialized (*.tif)** if serialized, single page TIFF images are needed, or any of the other output file types.

Appending Multiple Files Into a Single TIFF Image

Creating a single multi-page TIFF file from several different documents is an easy task with Raster Image Printer. Once append mode is turned on, and the name and location of the output TIFF file is set, simply print the files to Raster Image Printer in the order in which you want them to appear in the TIFF file.

The TIFF append options are controlled through the *Save* tab on the Printing Preferences dialog. Close any open applications that you will be printing from before making changes as not all applications will see your changes until they are re-started. Changing the options using the following steps is a global change, meaning that all applications will use these settings when printing to Raster Image Printer.

Step by Step Instructions

> You can make the same changes outlined below through the Properties button on each application's Print dialog as you print your files, but it is generally easier to make this change once, and then print all the files.

The following steps show how to turn on the append mode and set up the resulting file name to create a TIFF file containing a fax header page printed from Microsoft Word® followed by an e-mail message printed from Microsoft Outlook®.

1. From the Windows Start menu, go to All Programs - Raster Image Printer 11.0 - Properties...

2. Click on the *Save* tab in the Printing Preferences dialog.
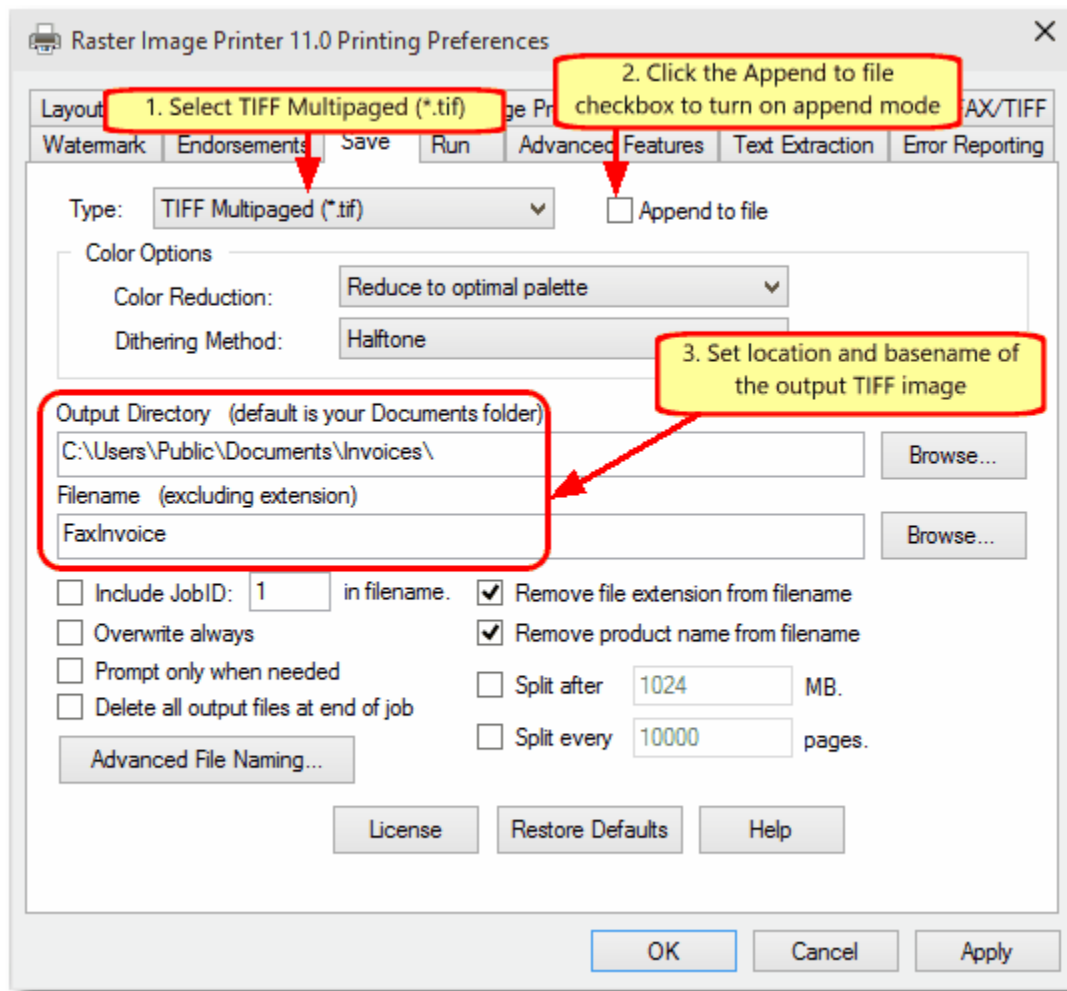
- Select **TIFFMultipaged (*.tif)** from the *Type* drop-down list box.

- Click the *Append to file* check box to turn on append mode. Append mode will append to an existing file if that file already exists, or it will create a new file if no file of that name is found.

- In the *Output Directory* field, type in the folder where you want to save your TIFF images. You can also use the Browse… button to find a folder on your computer. If the field is left blank, the **Documents** folder is used by default.

- In the *Filename* field, type in the base name you want to use for your TIFF image. This name needs to be the same each time you print for the pages to be appended.

3. Click the Apply button and then the OK button to set the changes. If the output directory you typed in does not exist, you will be prompted to confirm creation of the new directory.

4. Open your first document and select File - Print from your application. In our sample, this would be the fax header printed from Microsoft Word®.
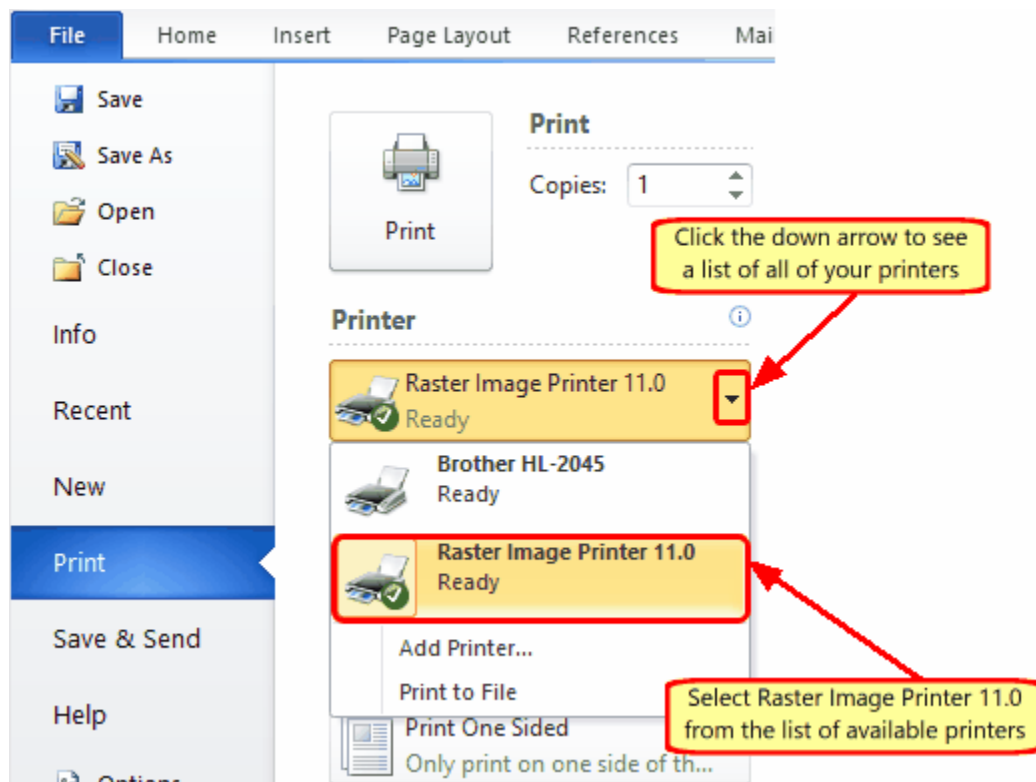
- In the printer field choose the **Raster Image Printer 11.0** from the list of printers.

- Click the OK button on the Print dialog (or the appropriate button on your application's print dialog) to send the document to the printer.

5. The Save Image File dialog will appear with the *Save in:*, *File name:* and other file save options set as specified in **Step 2**. Leave this information as shown and click the Save button to create the TIFF image.
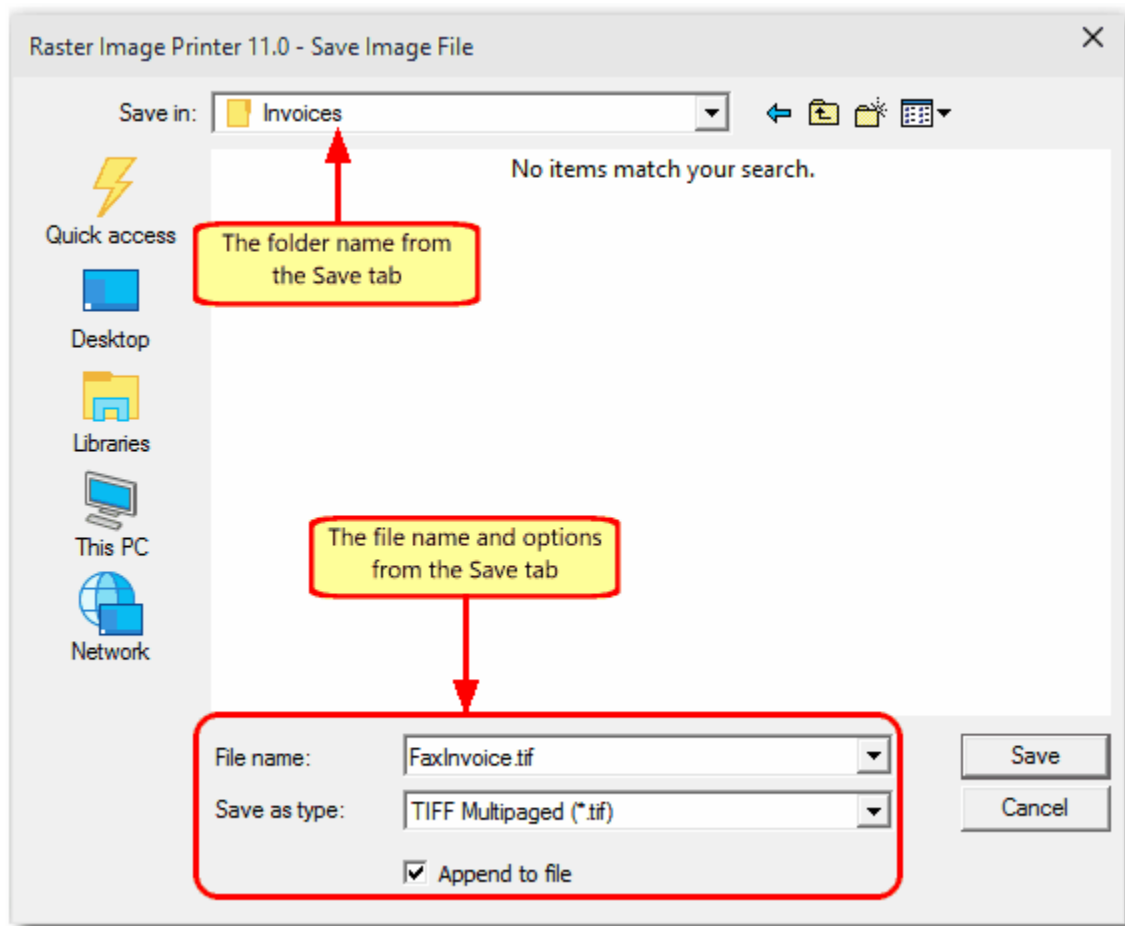
6. Open the second document, and select `File - Print` from your application. In our sample, this would be the e-mail message printed from Microsoft Outlook®.

7. The **Save Image File** dialog will again appear with the *Save in*, *File name:* and file save options set as specified in **Step 2**. The TIFF image created in **Step 5** is now listed in the folder. Click the **Save** button to append (add) the new page(s) to the existing TIFF image.
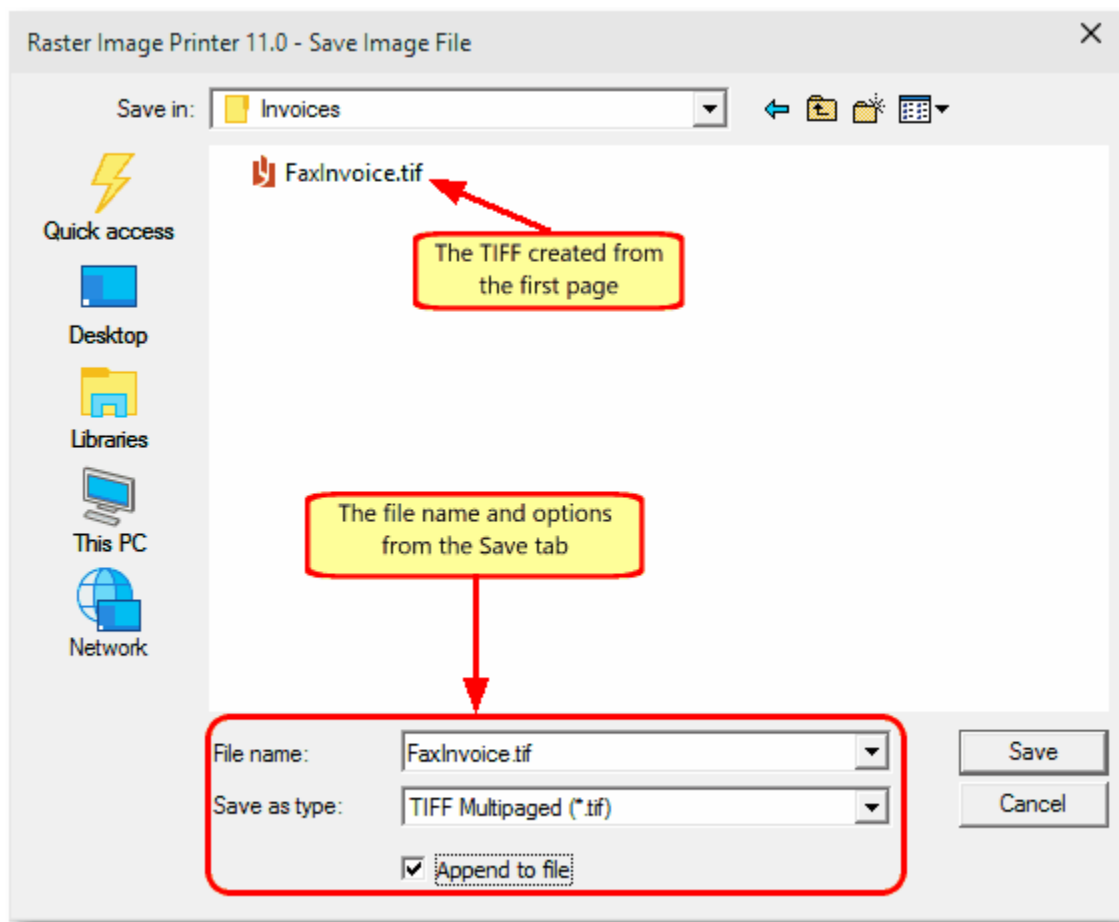
8. When you open the new TIFF image in your <u>TIFF viewer</u> you will see that all pages from the two documents are in the file. In our sample each file had a single page; this resulted in a two-page TIFF image. Please note that not all image viewers will properly display multi-page TIFF images.
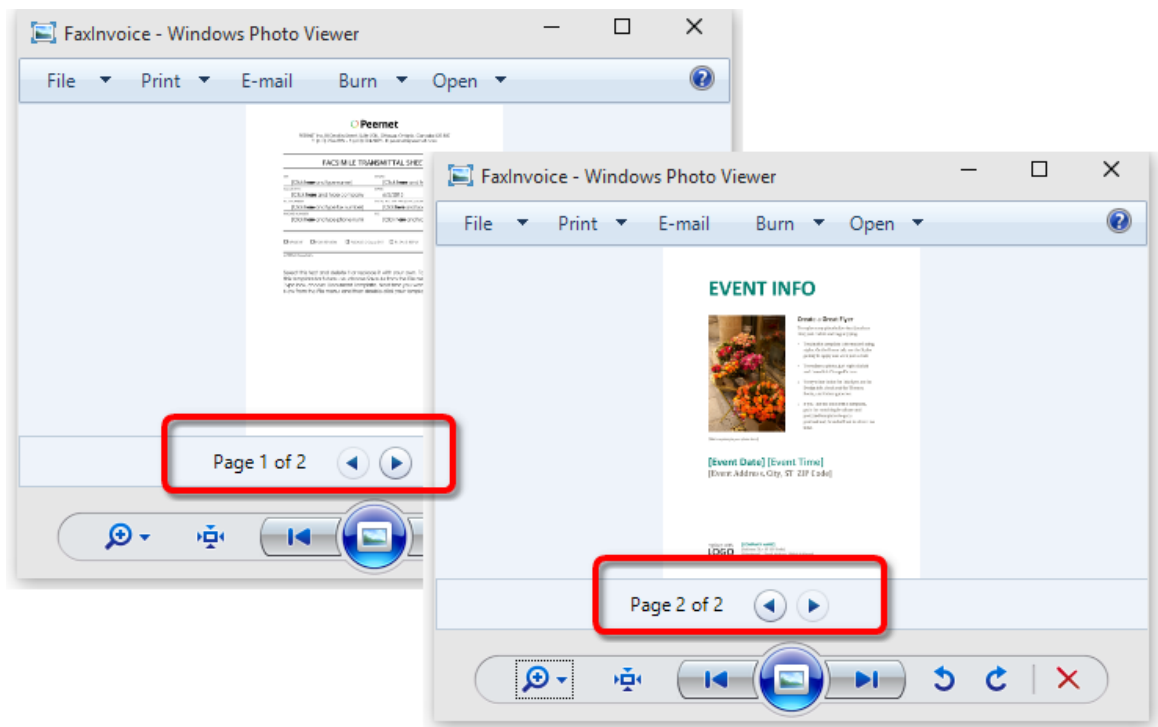
Placing Endorsements on Your Pages

Endorsements are header and footer information containing text that can be added to the top and bottom of each printed page. Separate endorsements can be added to the left, center and right of the top of the page (the header) and the left, center and right of the bottom of the page (the footer).

Page Header Left	Page Header Center	Page Header Right
Page Footer Left	Page Footer Center	Page Footer Right

An endorsement contains text such as titles and page numbers. The text in each endorsement can be formatted for font size, style and color. The steps below will add both a header and a footer endorsement on each page created by Raster Image Printer.

The header endorsement is the text "Page " and the current page number printed in the top right corner of each page. This endorsement will be in the default font of Arial 12 point, colored black. The footer endorsement is the text "Internal Use Only - Confidential" placed at the bottom center of each page. The footer text is formatted so that it is Verdana 14 point, colored red, and with only the words "Internal Use Only" in bold text.

While the sample only shows a single endorsement in each header and footer, you can have separate endorsements in each left, center and right section at the same time.

Step by Step Instructions

1. Select File - Print from your application The example below uses Microsoft® Word; your print dialog may look different from what is pictured here.
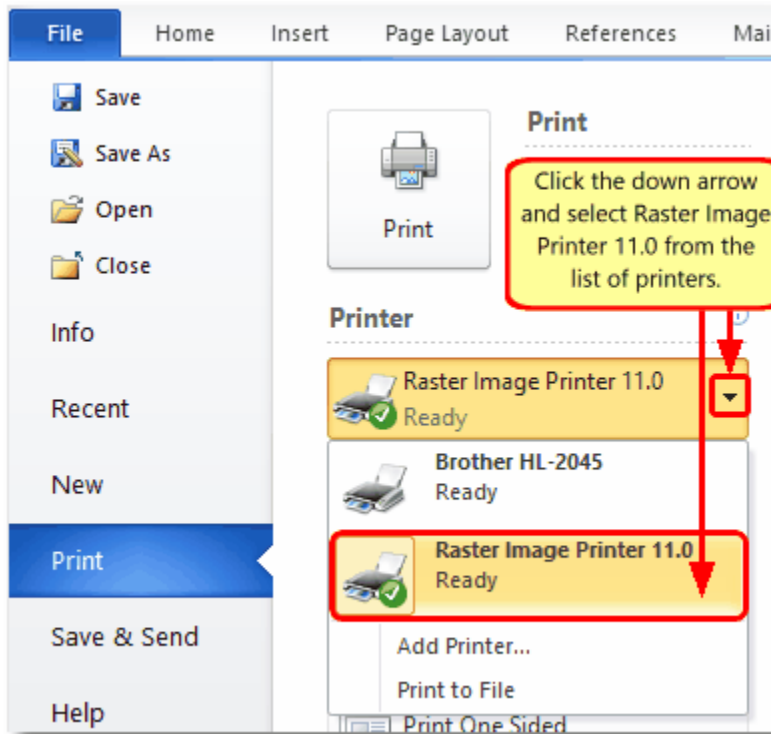
- In the printer field choose the Raster Image Printer 11.0 from the drop-down list of printers.
- Click the Properties… button to open the Raster Image Printer properties dialog box.
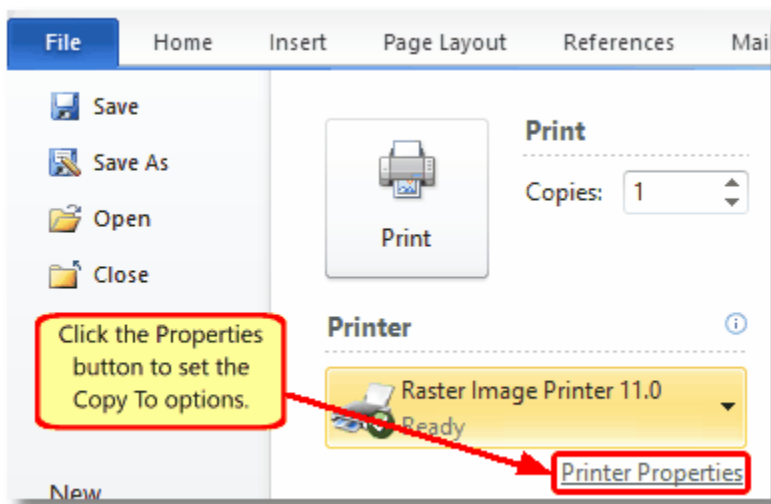
2. Click on the *Endorsements* tab in the Document Properties dialog to access the

endorsement options. The first step is to add the text "*Page* " and the current page number as a header endorsement in the top right corner of each page in the default font of 12 point Arial black.
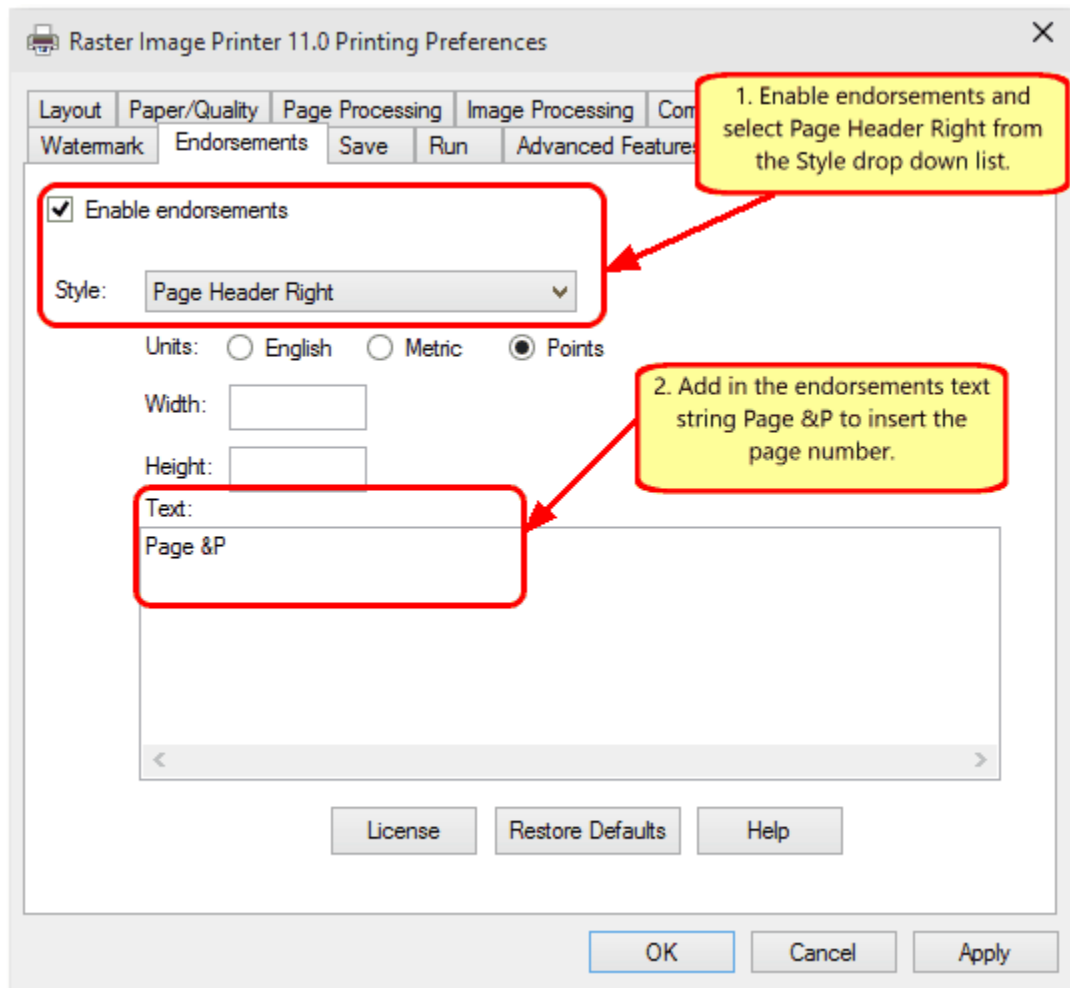
- Check the *Enable endorsements* check box to enable the endorsement options.

- Select *Page Header Right* from the **Style** drop down list.

- Add the endorsement text string *Page &P* into the **Text** field. The *formatting code* &P will be replaced with the current page number.

3. The next step is to add the text *"Internal Use Only - Confidential"* at the bottom center of each page. The footer text is formatted so that it is Verdana 14 point, colored red, with the words "Internal Use Only" in bold text, and placed at the bottom center of each page.
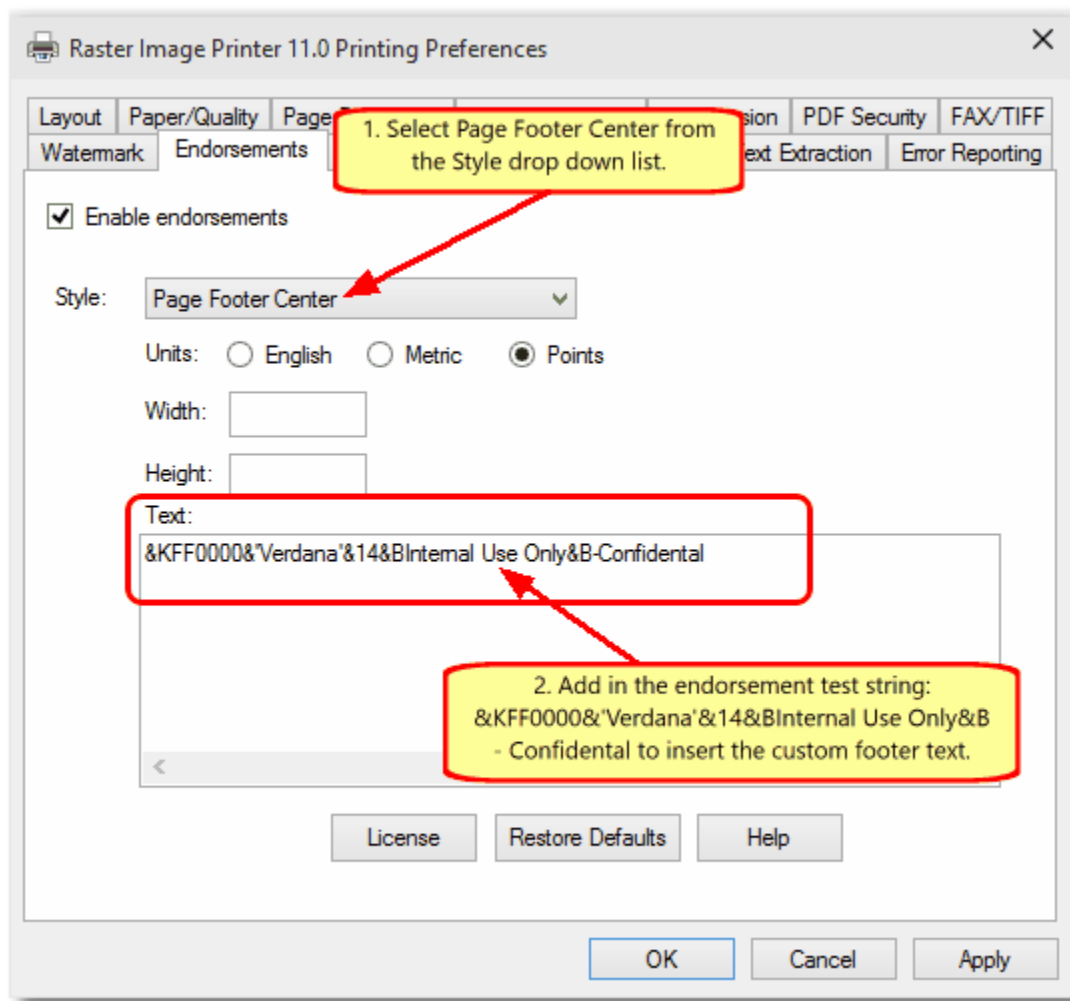
- Select *Page Footer Center* from the **Style** drop down list.

- Add the endorsement text string *&KFF0000&'Verdana'&14&BInternal Use Only&B - Confidential* into the **Text** field. The formatting codes used in this string are:

  o **&K** to set the color of the text to red using the RGB color code FF0000.

  o **&'*fontname*'** to set the font to Verdana.

  o **&*14*** to set the font size to 14 points.

  o **&B** to define the start and end positions of the endorsement string to be displayed in bold text.

4. Click the OK button on the Document Properties dialog to save the endorsement options.

5. Click the OK button on the Print Dialog, or the appropriate button on your application's print dialog, to send the document to the printer.

6. Choose where to save your JPG image from the Save Image File dialog.

- Use the *Save in:* field to choose a folder to store your JPG image. Your Documents folder, or any folder your have chosen on the <u>Save</u> tab will have been selected for you by default.

- In the *File name:* field, enter a name for your JPG image. A default name for your file has been filled in based on the name your application used when it printed your document to the Raster Image Printer. Here we have changed the file name to **EndorsedJPG**.

- The *Save as type:* drop down list can be used to change the output file type if needed. In this example we are leaving it at the default of **JPEG (*.jpg)**.

- Click the Save button to create the file in the folder you chose.

7. Open the new JPG image in your <u>Image viewer</u>. The extra header and footer information has been added to each page.
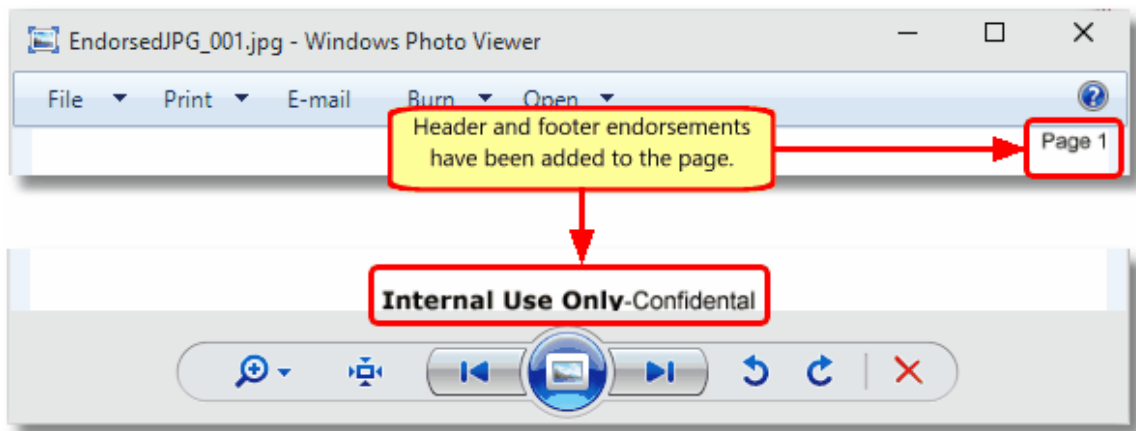
Using the Crop Features

The cropping features in Raster Image Printer are used to crop, or cut away, the outer parts of the page, and keep the inner area. While most often associated with editing photos, cropping also works to remove unwanted areas of your printed pages.

A side effect of cropping the margins or an area can be a change in outputted page size. If you need to remove the margins, and also keep the original page size, see the section on Using the Copy To Image Features.

See the following sections for step-by-step guides to using the cropping features.

> ➢ Cropping Margins
> ➢ Cropping an Area or Region

Cropping Margins

An example of how to use this feature would be to use the crop features to remove a solid-color frame (border) on each page, such as the white border around the page shown below.
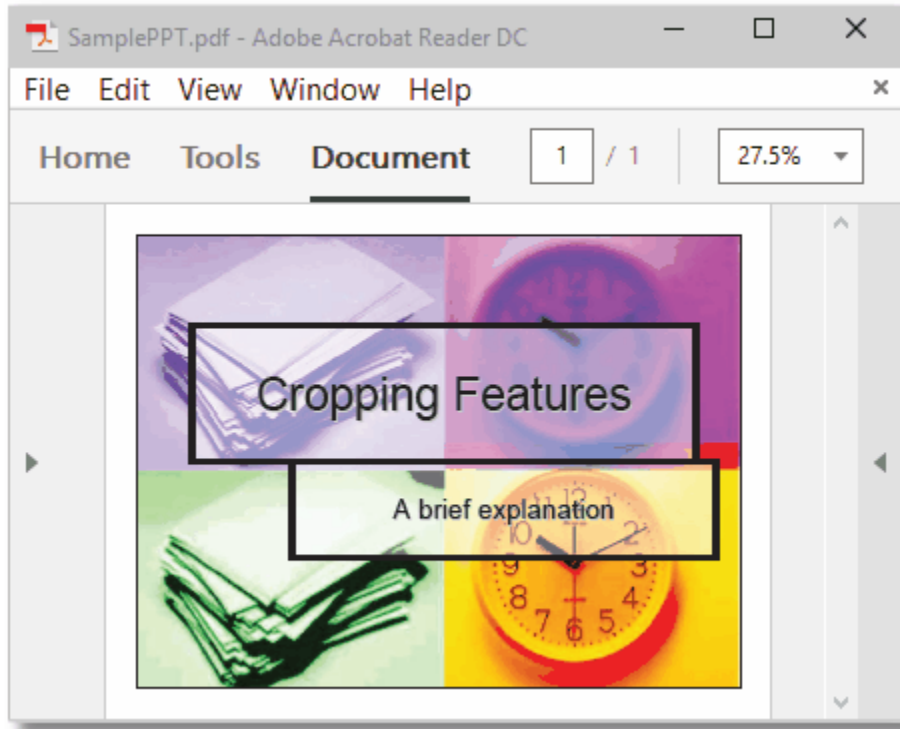
In this scenario, what we are cropping is the part of the image to be discarded.

Step by Step Instructions
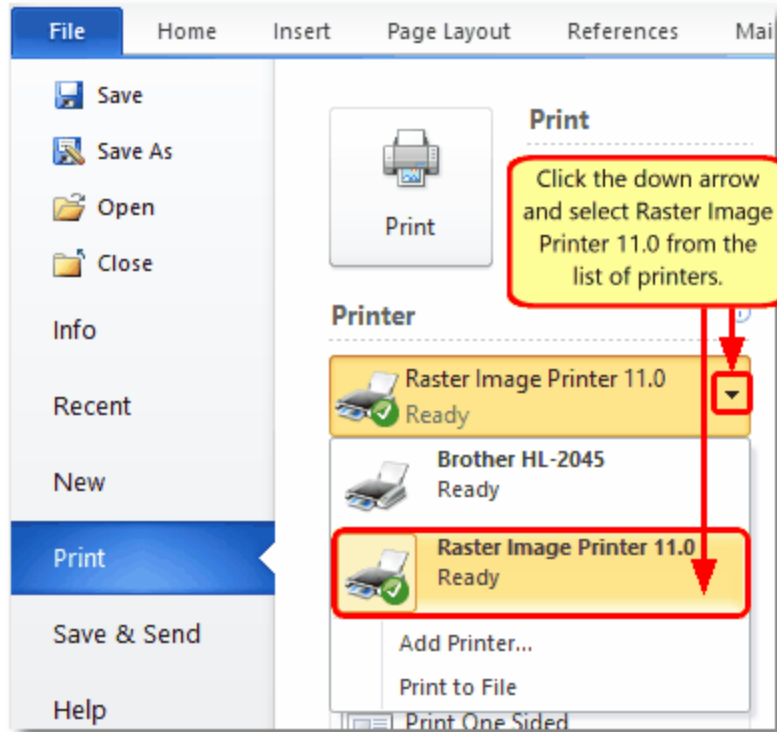
1. Select `File - Print` from your application.

*   In the printer field choose the Raster Image Printer 11.0 from the drop-down list of printers.

*   Click the `Properties...` button to open the Raster Image Printer properties dialog box.
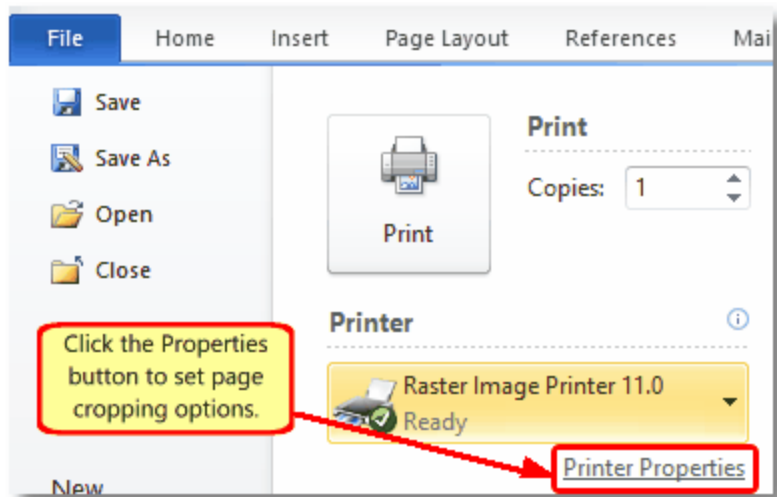
2. Click on the *Page Processing* tab in the `Document Properties` dialog to access the cropping options.
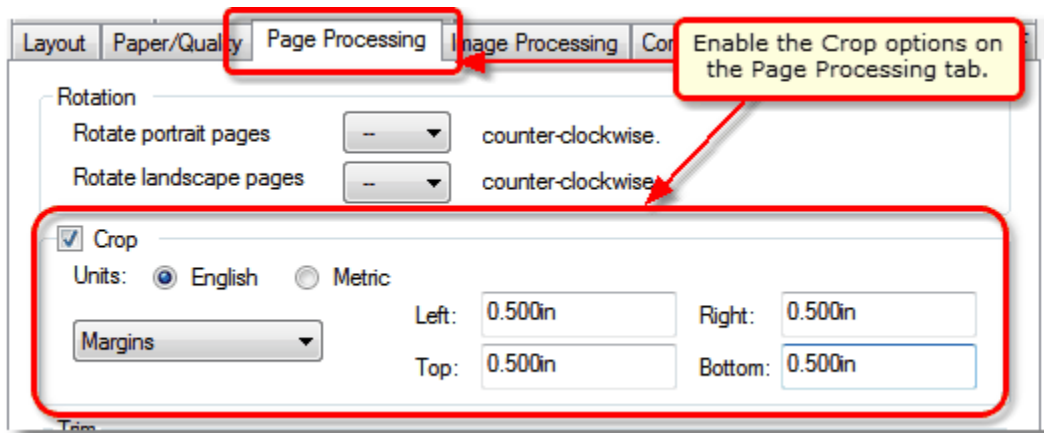
- Check the *Crop* check box to enable the cropping options.

- Select *Margins* from the drop-down list of cropping areas.

- For each side of the page, *Left*, *Top*, *Right* and *Bottom*, enter in the margin width to crop. Our sample page has a left, right, top and bottom margin of one-half an inch (0.500in).

> If you do not know the margin size used on your page, print the page to a hardware printer and use a ruler to measure the margins on the physical piece paper. Printers can add an extra hardware margin width on a printed page that may have to be adjusted for.

3. As the source document is a landscape oriented document, the *Orientation* of the printer also needs to be changed to *Landscape* to match. If your source document is portrait, the *Orientation* would be set to *Portrait*.

   - On the *Layout* tab, select **Landscape** from the *Orientation* drop down list.

4. Click the OK button on the Document Properties dialog to save the cropping options.

5. Click the OK button on the Print Dialog, or the appropriate button on your application's print dialog, to send the document to the printer.

6. Choose where to save your JPG image from the Save Image File dialog.

- Use the *Save in:* field to choose a folder to store your JPG image. Your Documents folder, or any folder you have chosen on the Save tab will have been selected for you by default.

- In the *File name:* field, enter a name for your JPG image. A default name for your file has been filled in based on the name your application used when it printed your document to the Raster Image Printer. Here we have changed the file name to **CroppedJPG**.

- The *Save as type:* drop down list can be used to change the output file type if needed. In this example we are leaving it at the default of **JPEG (*.jpg)**.

- Click the Save button to create the file in the folder you chose.

7. Open the new JPG image in your Image viewer. The white borders, or margins, have been cropped from document.

- A side effect of cropping the margins has been a change in page size. The original document consisted of a landscape-oriented, Letter-sized page, 11.00in x 8.50in. Removing a 0.50in strip from each side of the page leaves a 10.00in x 7.50in image area. If you need to remove the margins, and also keep the original page size, you need to combine the above steps with the steps outlined in Using the Copy To Image Features.

Cropping an Area or Region

An example of how to use this feature would be to use the crop features to cut the desired part of the image out of the page. Imagine a smaller piece of paper that you can move around on top of a larger piece of paper; whatever is under the smaller piece of paper is the "cropping area".

In the sample below, we can use Raster Image Printer to crop the colored area of the page, essentially discarding the solid-color frame (white border) on each page. In this scenario what we are cropping is the part of the image to be kept.
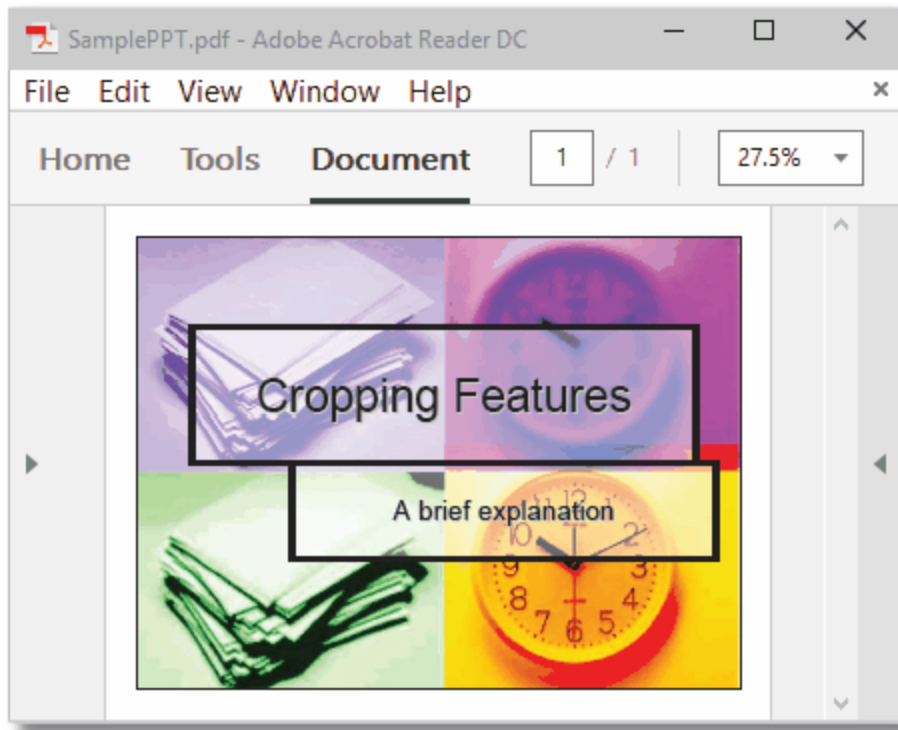
Step by Step Instructions
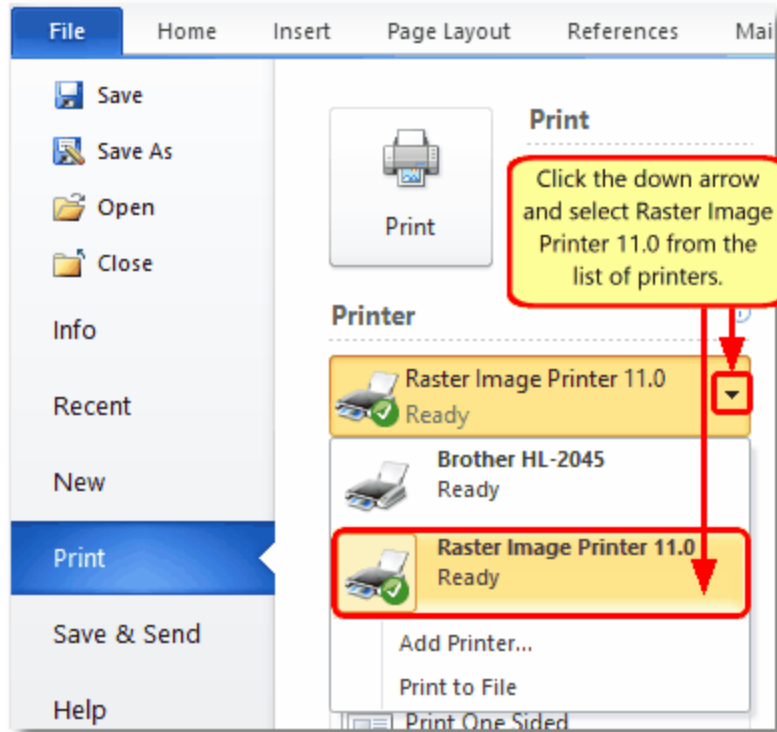
1. Select File - Print from your application.

- In the printer field choose the Raster Image Printer 11.0 from the drop-down list of printers.

- Click the Properties... button to open the Raster Image Printer properties dialog box.
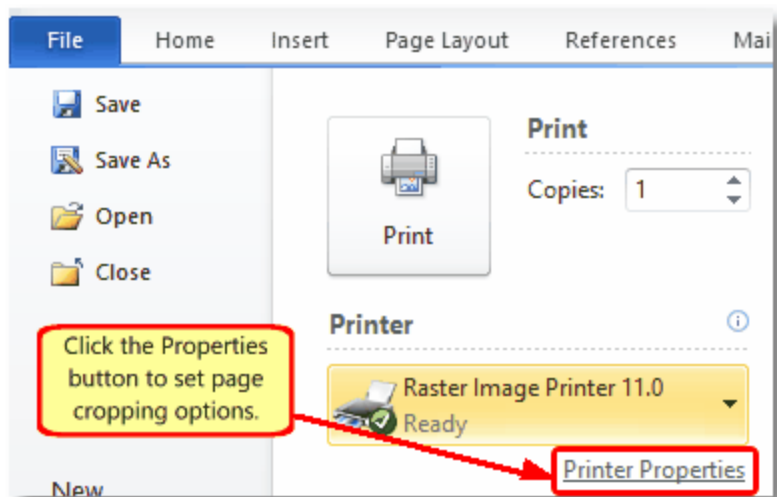
2. Click on the *Page Processing* tab in the Document Properties dialog to access the cropping options.
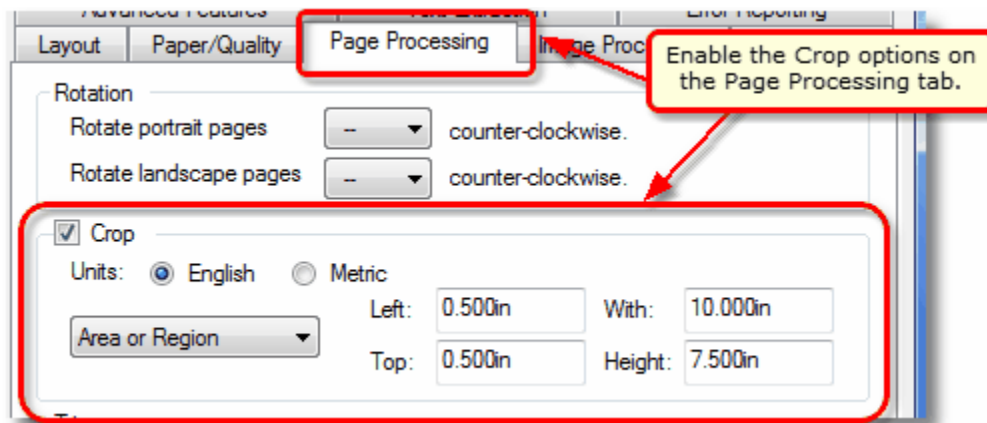
- Check the *Crop* check box to enable the cropping options.

- Select *Area or Region* from the drop-down list of cropping areas.

- For each of the *Left*, *Top*, *Width* and *Height* fields, enter in the following:

  - In the *Left* field, enter in how far from the left hand side to start cropping. For the sample page, 0.50in is entered to start the cropping after the ½ inch white margin on the left.

  - In the *Top* field, enter in how far down from the top edge of the page to start cropping. For the sample page, 0.50in is entered to start the cropping after the ½ inch white margin on the top of the page.

  - In the *Width* field, enter in the width of the area to crop. For the sample page, we want a width of 10.00 inches. This means that starting at ½ an inch from the left side of the page, 10.00 inches of the image will be cropped out.

  - In the *Height* field, enter in the height of the area to crop. For the sample page, we want a height of 7.50 inches. This means that starting at ½ an inch from the top of the page, 7.50 inches of the image will be cropped out.

> If you do not know the size of the area you wish to crop, print the page to a hardware printer and use a ruler to measure the area on the physical piece paper.

3. As the source document is a landscape oriented document, the *Orientation* of the printer needs to be changed to *Landscape* to match. If your source document is portrait, the *Orientation* needs to be set to *Portrait*.

   - On the *Layout* tab, select **Landscape** from the *Orientation* drop down list.

4. Click the OK button on the Document Properties dialog to save the cropping options.

5. Click the OK button on the Print Dialog, or the appropriate button on your application's print dialog, to send the document to the printer.

6. Choose where to save your JPG image from the Save Image File dialog.

- Use the *Save in:* field to choose a folder to store your JPG image. Your Documents folder, or any folder you have chosen on the Save tab will have been selected for you by default.

- In the *File name:* field, enter a name for your JPG image. A default name for your file has been filled in based on the name your application used when it printed your document to the Raster Image Printer. Here we have changed the file name to **CroppedJPG**.

- The *Save as type:* drop down list can be used to change the output file type if needed. In this example we are leaving it at the default of **JPEG (*.jpg)**.

- Click the Save button to create the file in the folder you chose.

7. Open the new JPG image in your Image viewer. Only the center colored area is in the new file.

- A side effect of cropping the area has been a change in page size. The original document consisted of a landscape-oriented, Letter-sized page, 11.00n x 8.50in. Starting from 0.50in from the top and the left of the page, and cropping an area that is 10.00in x 7.50in leaves an area of exactly 10.00in x 7.50in. If you need to remove the margins, and also keep the original page size, you can combine the above steps with the steps outlined in Using the Copy To Image Features.

Using the Trimming Features

The trimming feature is an easy way to remove unwanted margins or borders from your pages. While similar to cropping, trimming is an automatic process. All areas to the *left*, *top*, *right* and *bottom* of the document where the color falls at or below the chosen intensity level are removed. As soon as a color that is above the intensity level is found, trimming on that side stops.

A common use of this feature would be to remove the lighter shades of grey on scanned images, as we do in the example below. This also works with color images as Raster Image Printer will use a greyscale representation of the page to determine trimming.
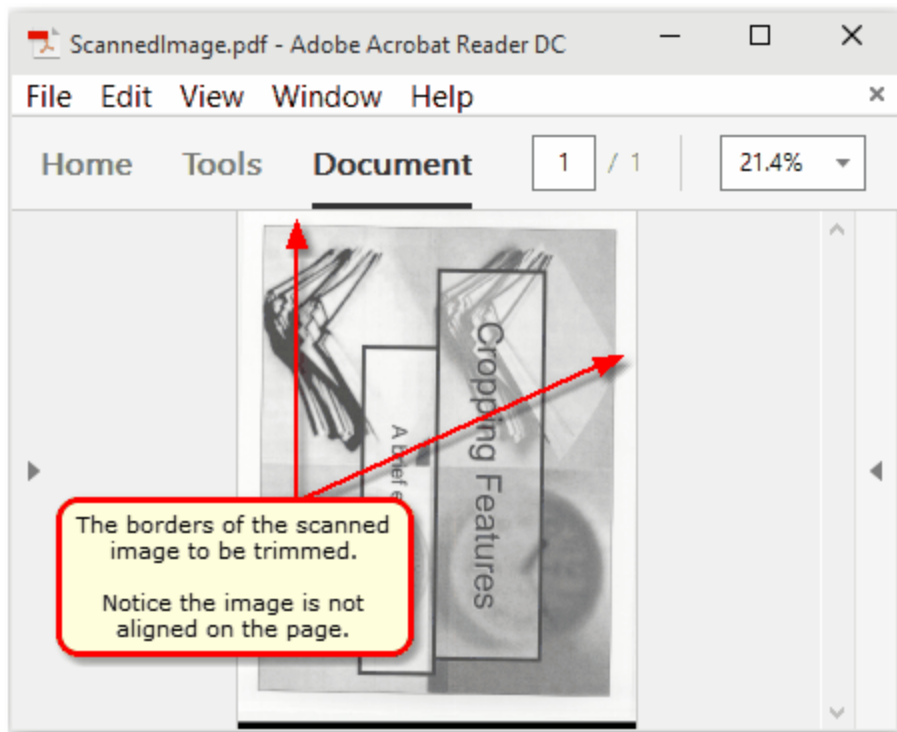
Step by Step Instructions
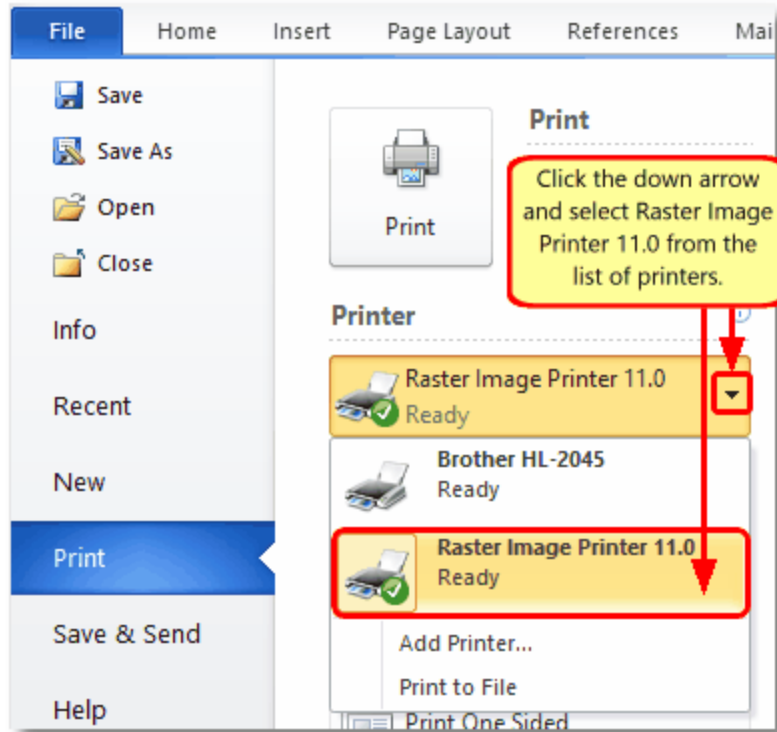
1. Select `File - Print` from your application.

- In the printer field choose the Raster Image Printer 11.0 from the drop-down list of printers.
- Click the `Properties...` button to open the Raster Image Printer properties dialog box.
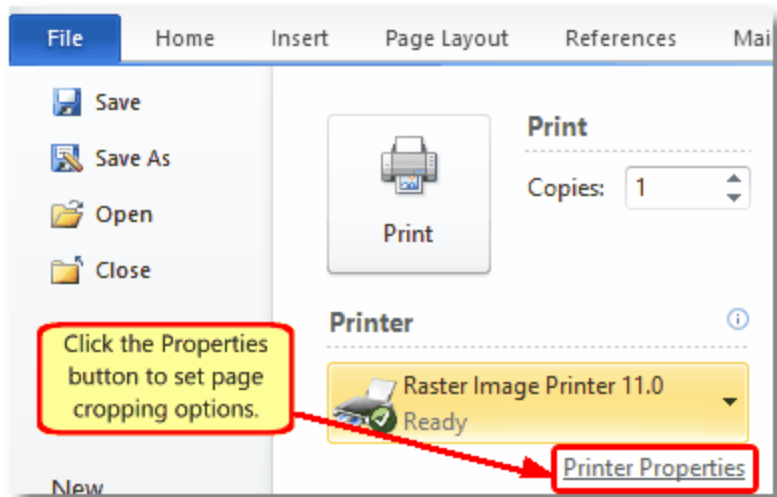
2. Click on the *Page Processing* tab in the `Document Properties` dialog to access the trimming options.
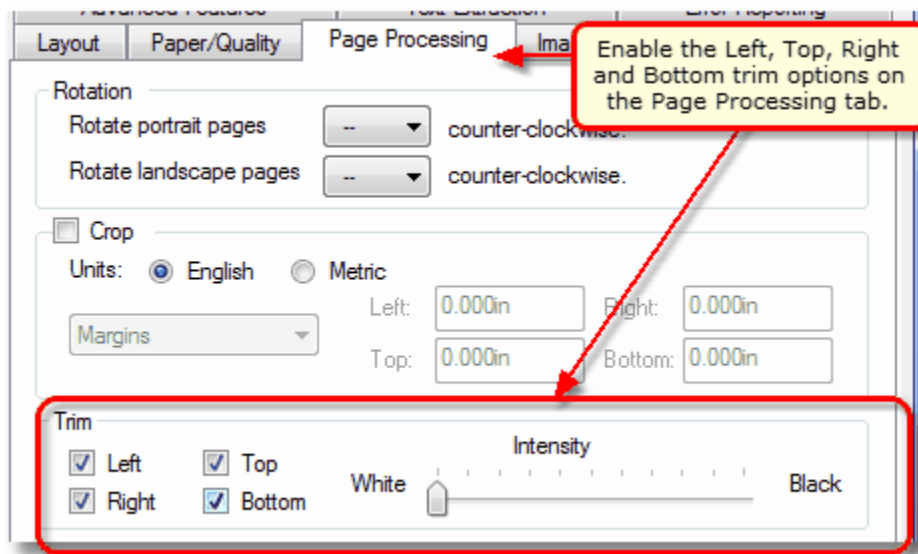
- Enable any one or all of the *Left*, *Top*, *Right* or *Bottom* check boxes to trim that side of the document. For our example, we need to trim all four sides of the document so all four check boxes have been checked.

- Click and drag the intensity slider to choose the level of grey to remove. If the slider is all the way to the left, or *White*, only pure white pixels will be removed. For a scanned image, the border is generally not pure white so the *Intensity* should be moved to the right. The darker the grey on the border, the further towards *Black* you will need to move the slider.
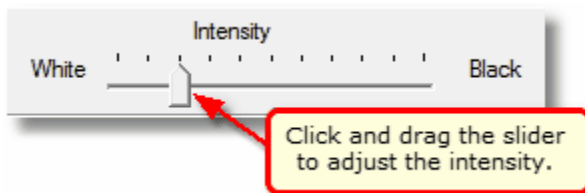
> If you were printing a document with a white border directly to the Raster Image Printer, you could leave the *Intensity slider* on *White* to remove the border.
>
> If the slider is moved all the way to *Black*, then trimming operation would effectively remove the entire document. In these cases, the trimming operation is not performed.

4. Click the OK button on the Document Properties dialog to save the trimming options.

5. Click the OK button on the Print Dialog, or the appropriate button on your application's print dialog, to send the document to the printer.

6. Choose where to save your JPG image from the Save Image File dialog.

- Use the *Save in:* field to choose a folder to store your JPG image. Your Documents folder, or any folder your have chosen on the Save tab will have been selected for you by default.

- In the *File name:* field, enter a name for your JPG image. A default name for your file has been filled in based on the name your application used when it printed your document to the Raster Image Printer. Here we have changed the file name to **TrimmedJPG**.

- The *Save as type:* drop down list can be used to change the output file type if needed. In this example we are leaving it at the default of **JPEG (*.jpg)**.

- Click the Save button to create the file in the folder you chose.

7. Open the new JPG image in your Image viewer.
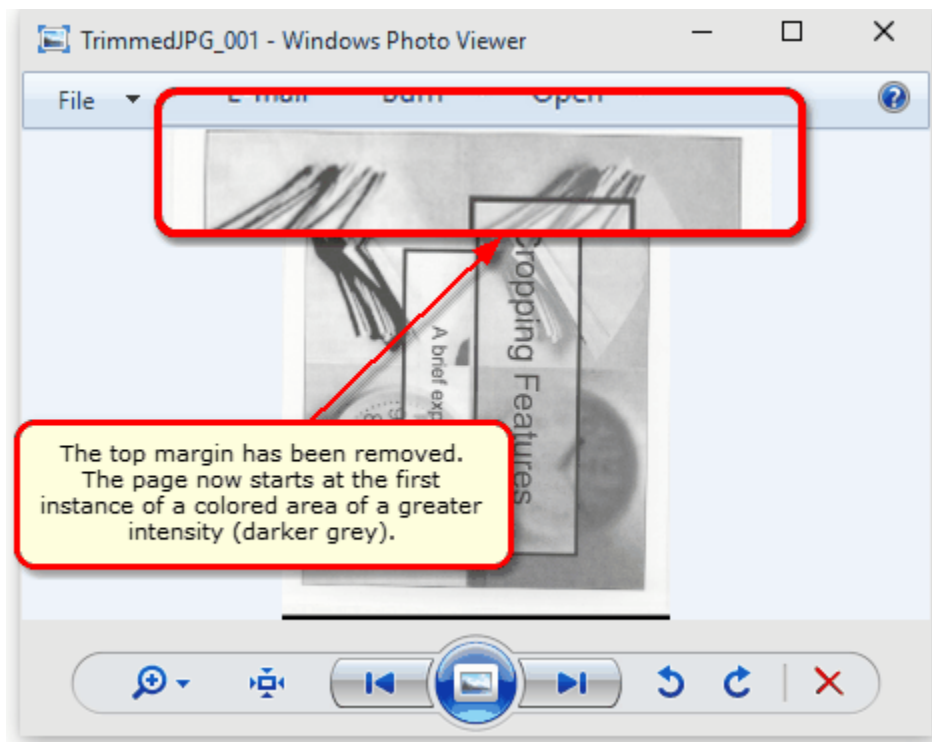
- The file no longer has the *Top* margin. There is still a strip of margin at the top as the page was originally skewed (*placed on an angle*) when it was scanned as an image.

- The *Left*, *Bottom*, and *Right* margins are still intact due to the black strip that runs across the bottom of the scanned image in the original file.

8. This is fixed by combining the Cropping Margins features to crop the black strip from the bottom of the page with the trimming features to remove the borders.
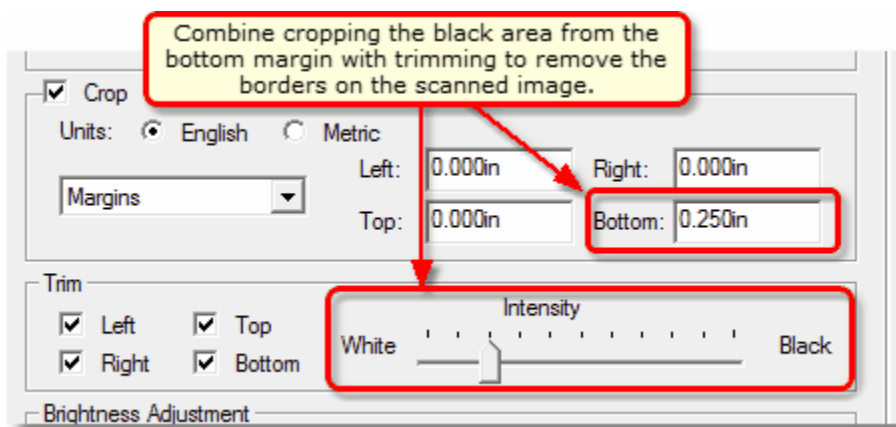
9. The JPG image created with both cropping and trimming enabled is shown below. As much of the margins (white border) as possible have been removed. The skew of the scanned page does mean that some margin is left.
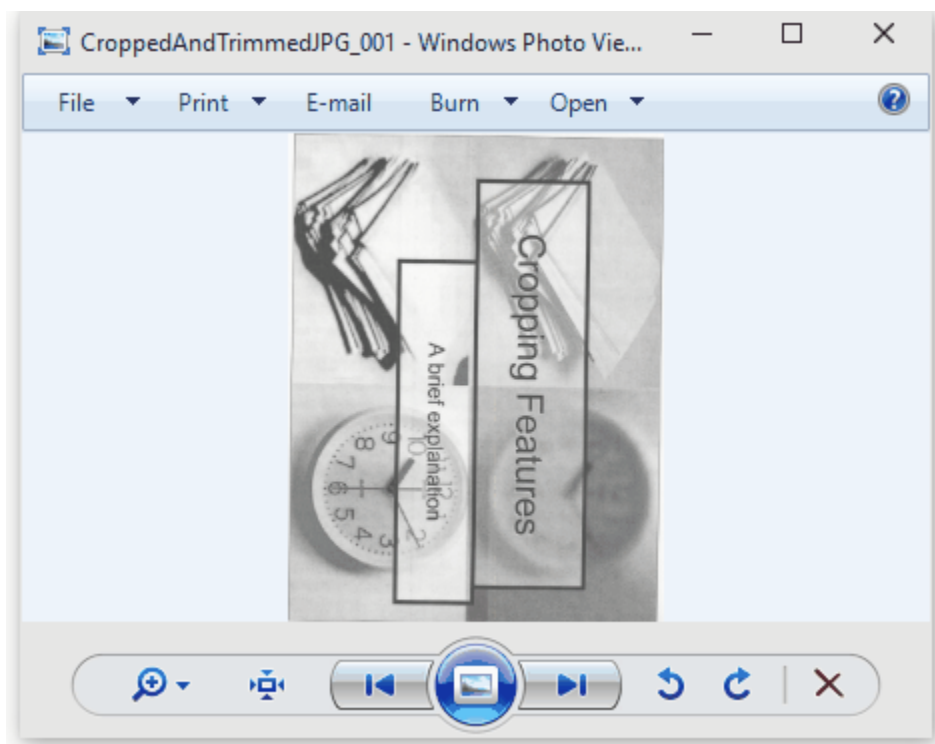
- A side effect of trimming has been a change in page size. The original document was a scanned Letter-sized page, 11.00in x 8.50in. The cropping and trimming resulted in an document with a page size of 10.01in x 7.64in. If you need to remove the margins, and also keep the original page size, you need to combine the above steps with the steps outlined in Using the Copy To Image Features.

Using the Copy To Image Feature

The Copy To feature is used to copy the output image to a new "page" of a different size.

If you have a document consisting of a mix of Letter, Legal and other paper sizes, the Copy To can be used to create an image or file where each page is the same size. It can also be used in conjunction with Cropping and Trimming to remove unwanted margins and borders and then place the image back onto the same size page, as shown in the steps below.

In this scenario, after cropping the margins from the original 11.00in x 8.50in page below, the resulting smaller image will be scaled and placed on an 11.00in x 8.50in image
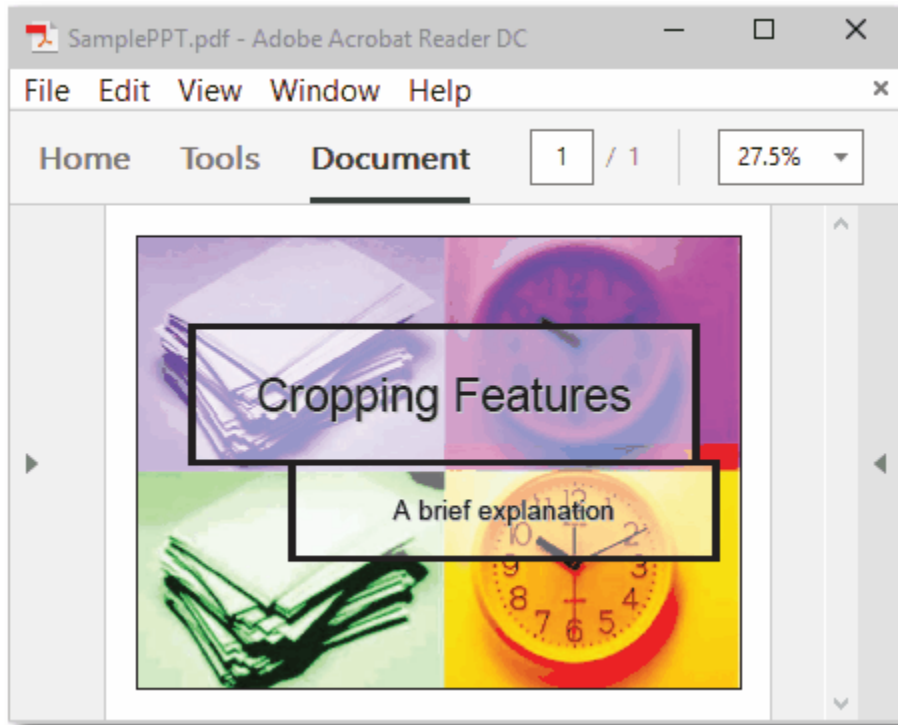
Step by Step Instructions

1. Select File - Print from your application; the example below uses Microsoft® Word.
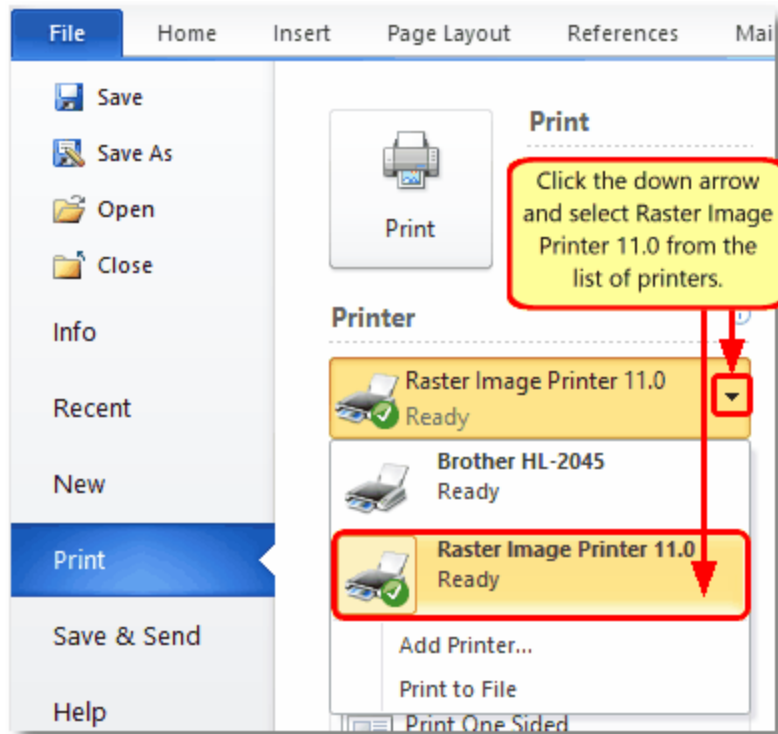
- In the printer field choose the Raster Image Printer 11.0 from the drop-down list of printers.

- Click the Properties… button to open the Raster Image Printer properties dialog box.
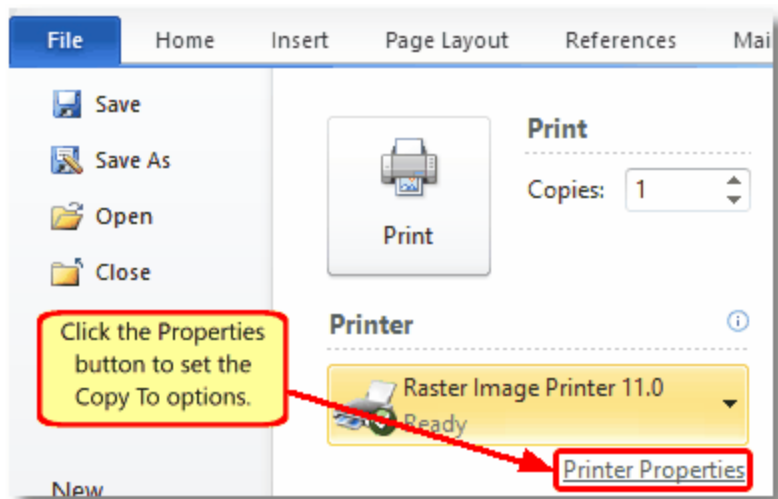
2. Click on the *Image Processing* tab in the Document Properties dialog to access the copy to options.
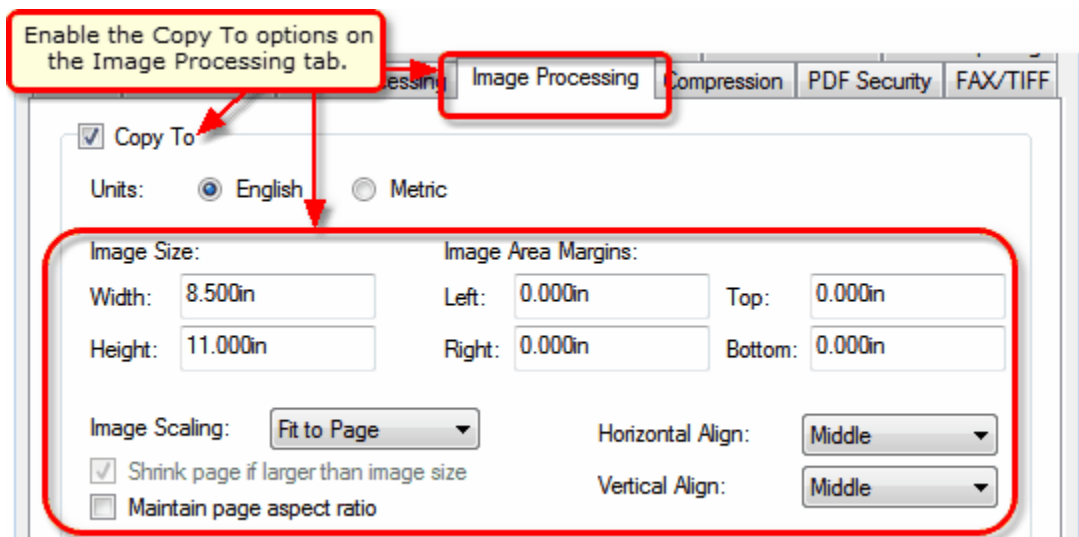
- Check the *Copy To* check box to enable the copy to options.

- Enter the *Width* and *Height* of the new image size; here we are using a width of 8.50in and a height of 11.00in.

- Set *Image Scaling* to **Fit to Page** and uncheck *Maintain page aspect ratio.* This will make the image to fit the page edge to edge with no white borders.

- Choose **Middle** for both *Horizontal Align* and *Vertical Align*. This will center the image on the page.

> When using the *Fit to Page* option you will most often keep the *Maintain page aspect ratio* option checked to keep the images from becoming distorted.
>
> The above example works as the remaining image has the same aspect ratio (the ratio between the width and the height of the image) as the page it is being copied to. When the aspect ratio between the source and the destination is different, you can end up with images that look stretched or squished.

3. Click on the *Page Processing* tab in the Document Properties dialog to access the cropping options.

- Check the *Crop* check box to enable the cropping options.

- Select *Margins* from the drop-down list of cropping areas.

- For each side of the page, *Left*, *Top*, *Right* and *Bottom*, enter in the margin width to crop. Our sample page has a left, right, top and bottom margin of one-half an inch(0.50in).

> 💡 If you do not know the margin size used on your page, print the page to a hardware printer and use a ruler to measure the margins on the physical piece paper. Printers can add an extra hardware margin width on a printed page that may have to be adjusted for.

4. As the source document is a landscape oriented document, the *Orientation* of the printer needs to be changed to *Landscape* to match. If your source document is portrait, the *Orientation* needs to be set to *Portrait*.

- On the *Layout* tab, select **Landscape** from the *Orientation* drop down list.
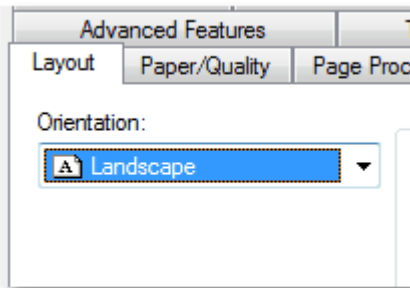
5. Click the OK button on the Document Properties dialog to save the copy to and cropping options.

6. Click the OK button on the Print Dialog, or the appropriate button on your application's print dialog, to send the document to the printer.

7. Choose where to save your JPG image from the Save Image File dialog.

- Use the *Save in:* field to choose a folder to store your JPG image. Your Documents folder, or any folder your have chosen on the Save tab will have been selected for you by default.

- In the *File name:* field, enter a name for your JPG image. A default name for your file has been filled in based on the name your application used when it printed your document to the Raster Image Printer. Here we have changed the file name to **CropAndCopyJPG**.

- The *Save as type:* drop down list can be used to change the output file type if needed. In this example we are leaving it at the default of **JPEG (*.jpg)**.

- Click the Save button to create the file in the folder you chose.

8. Open the new JPG image in your Image viewer.

- By using the *Copy to* features, the new JPG file is also the same size as the original document, but without the white borders.

Resizing Images Using Resampling

The Resample options on the Image Processing tab allow you to create image or files in custom sizes. The resampling features are not a replacement for choosing the proper page size on the Advanced Options dialog, or setting up a custom paper size through the Advanced Features tab.

You can resample images by choosing *Pixels*, *Percentage (%)* or *Resolution (DPI)*. To prevent image distortion (a stretched or squished image), *Lock Aspect Ratio* can be left checked to have Raster Image Printer calculate the height needed automatically.

See the following sections for step-by-step guides to using the cropping features:

➢   Resample Using Pixels

➢   Resample Using Percentage

➢   Resample Using Resolution

Resample Using Pixels

The steps below use the file pictured here to demonstrate resampling using pixels.
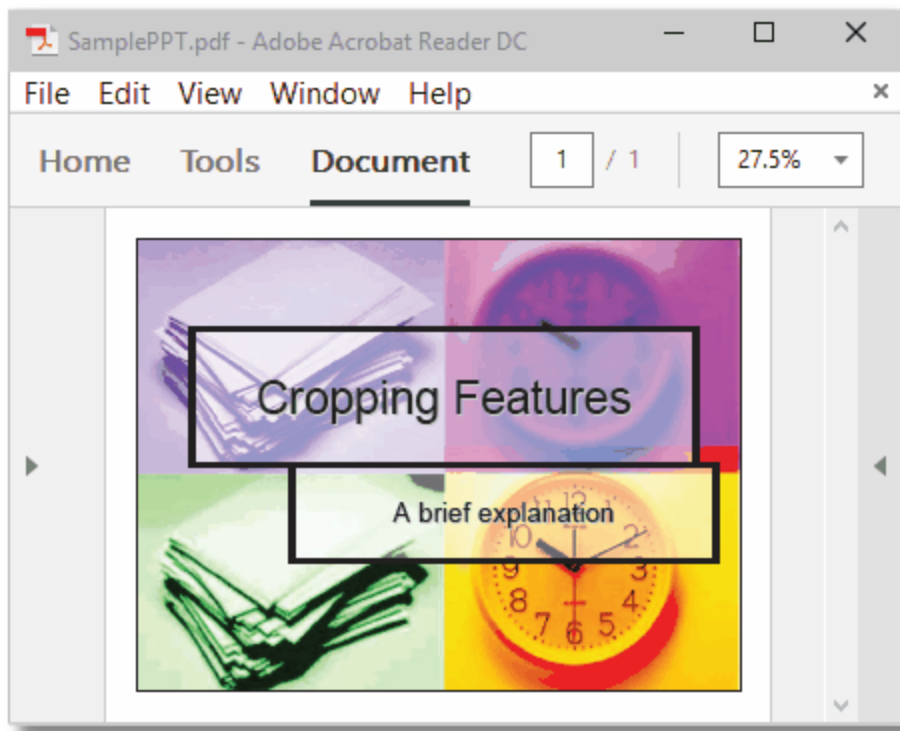
Step by Step Instructions

1. Select File - Print from your application; the example below uses Microsoft® Word.
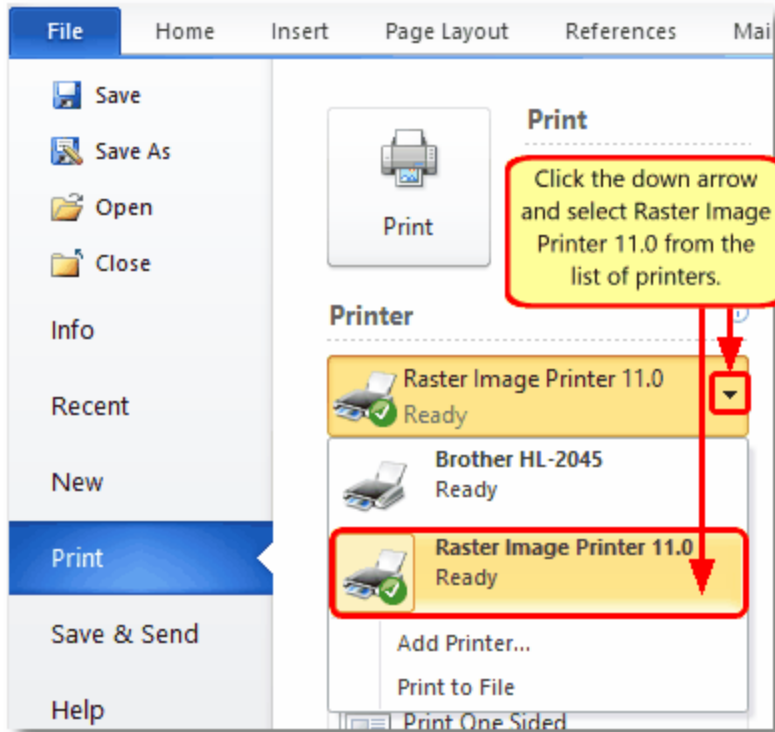
- In the printer field choose the Raster Image Printer 11.0 from the drop-down list of printers.

- Click the Properties… button to open the Raster Image Printer properties dialog box.
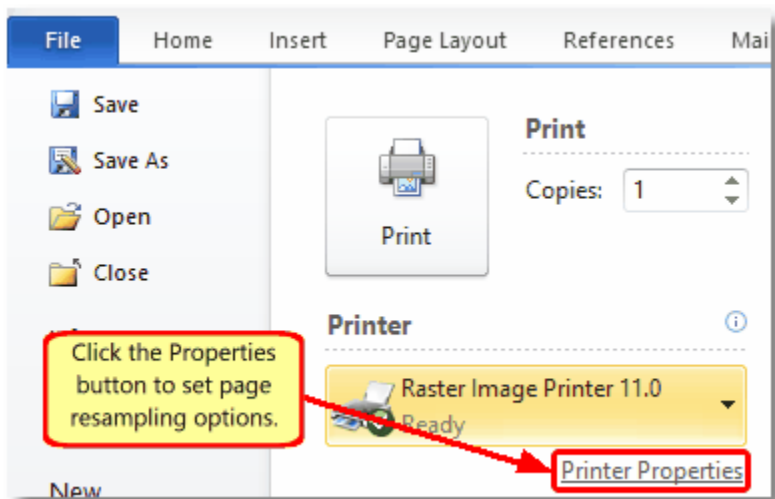
2. Click on the *Image Processing* tab in the Document Properties dialog to access the Resample options.
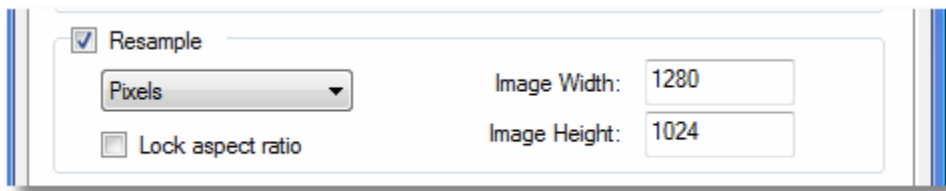
- Check the *Resample* check box to enable the resampling options.

- Select *Pixels* from the drop-down list of resampling options.

- Leave *Lock aspect ratio* checked if you want Raster Image Printer to automatically determine the *Image Height* of the image based on the value entered for the *Image Width*. For our sample page, we have unchecked the *Lock aspect ratio* and entered the *Image Height* and *Image Width* height and width separately.

3. As the source document is a landscape oriented document, the *Orientation* of the printer needs to be changed to *Landscape* to match. If your source document is portrait, the *Orientation* needs to be set to *Portrait*.

- On the *Layout* tab, select **Landscape** from the *Orientation* drop down list.

4. Click the OK button on the Document Properties dialog to save the resample options.

5. Click the OK button on the Print Dialog, or the appropriate button on your application's print dialog, to send the document to the printer.

6. Choose where to save your JPG image from the Save Image File dialog.

- Use the *Save in:* field to choose a folder to store your JPG image. Your Documents folder, or any folder you have chosen on the Save tab will have been selected for you by default.

- In the *File name:* field, enter a name for your JPG image. A default name for your file has been filled in based on the name your application used when it printed your document to the Raster Image Printer. Here we have changed the file name to **ResampleJPG**.

- The *Save as type:* drop down list can be used to change the output file type if needed. In this example we are leaving it at the default of **JPEG (*.jpg)**.

- Click the Save button to create the file in the folder you chose.

7. Open the new JPG image in your Image viewer. The image is 1280 pixels x 1024 pixels. The dots per inch (DPI) of the image has been automatically calculated based on the new image height and width.
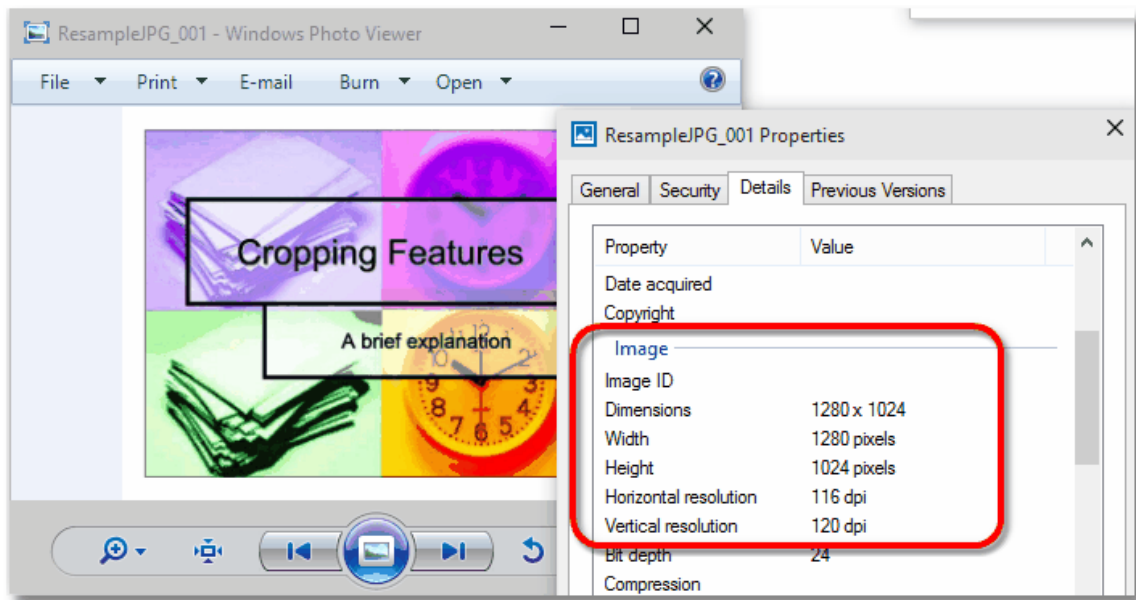
Resample Using Percentage

The steps below use the file pictured here to demonstrate resampling an image as a percentage of its original size. An image can be resampled from 1% of its original size up to 500% larger than its original size.
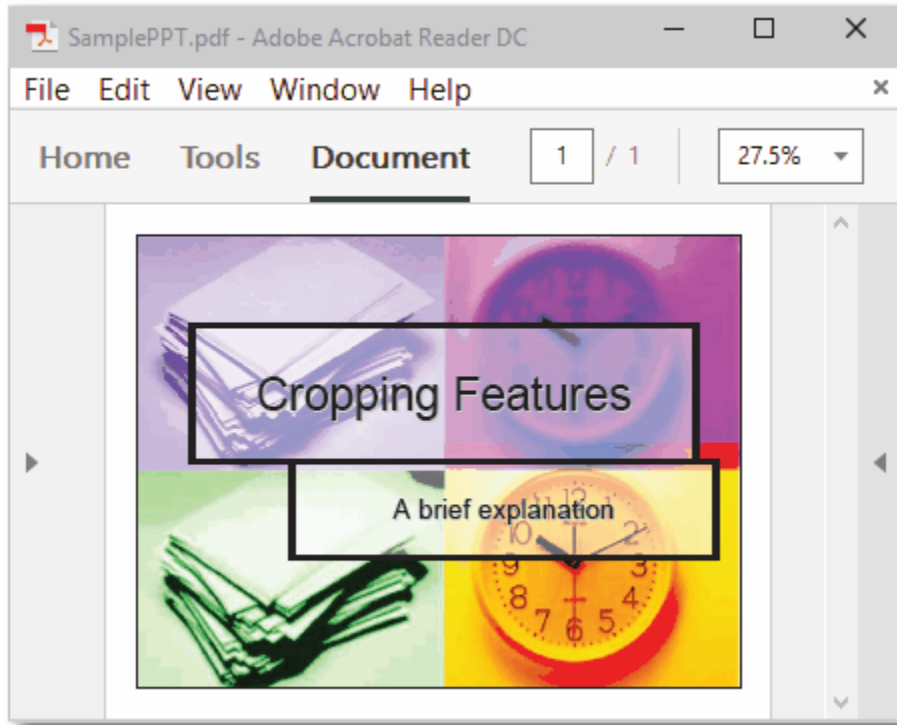
Step by Step Instructions

1. Select `File - Print` from your application; the example below uses Adobe Reader.
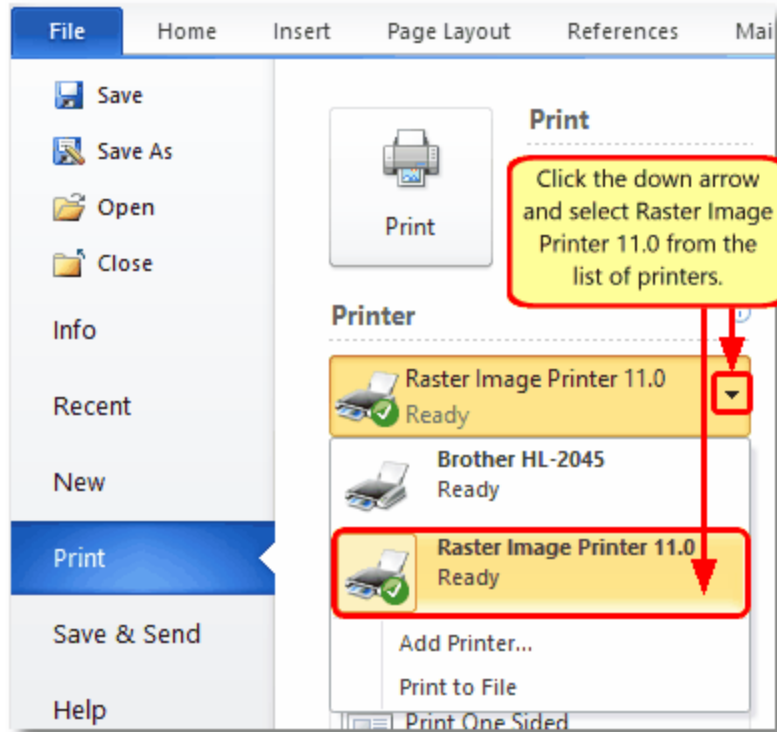
-   In the printer field choose the Raster Image Printer 11.0 from the drop-down list of printers.

-   Click the `Properties...` button to open the Raster Image Printer properties dialog box.
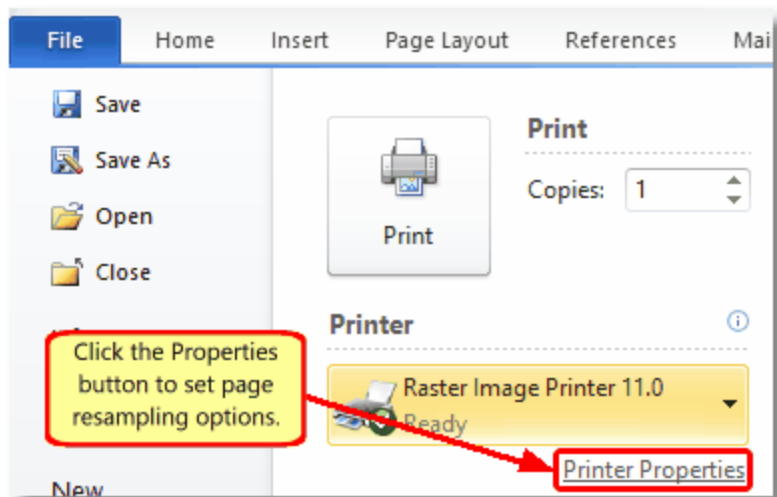
2. Click on the *Image Processing* tab in the `Document Properties` dialog to access the Resample options.
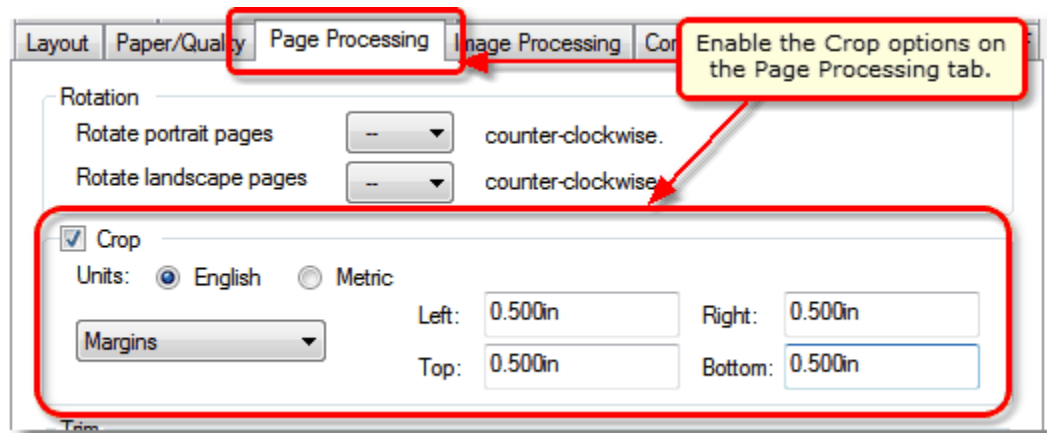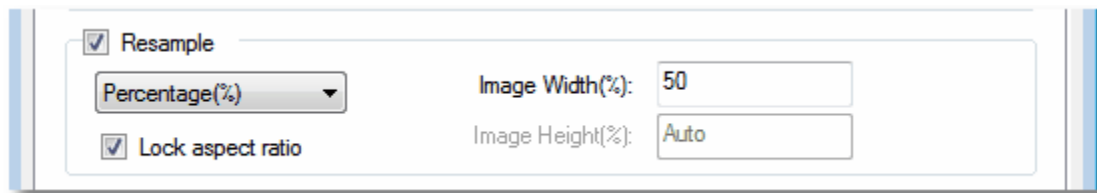
- Check the *Resample* check box to enable the resampling options.

- Select *Percentage(%)* from the drop-down list of resampling options.

- Enter in the percentage by which to resize the image. Any amount under 100% will shrink the image, and any amount greater than 100% will enlarge the image. A percentage of 100% leaves the image at its original size. For our sample page, we have checked the *Lock aspect ratio* check box and entered 50 for the *Image Width(%)*. This will give an image half the size (50%) of the original.

3. As the source document is a landscape oriented document, the *Orientation* of the printer needs to be changed to *Landscape* to match. If your source document is portrait, the *Orientation* needs to be set to *Portrait*.

   - On the *Layout* tab, select **Landscape** from the *Orientation* drop down list.

4. Click the OK button on the Document Properties dialog to save the resample options.

5. Click the OK button on the Print Dialog, or the appropriate button on your application's print dialog, to send the document to the printer.

6. Choose where to save your JPG image from the Save Image File dialog.

- Use the *Save in:* field to choose a folder to store your JPG image. Your Documents folder, or any folder you have chosen on the Save tab will have been selected for you by default.

- In the *File name:* field, enter a name for your JPG image. A default name for your file has been filled in based on the name your application used when it printed your document to the Raster Image Printer. Here we have changed the file name to **ResampleJPG**.

- The *Save as type:* drop down list can be used to change the output file type if needed. In this example we are leaving it at the default of **JPEG (*.jpg)**.

- Click the Save button to create the file in the folder you chose.

7. Open the new JPG image in your Image viewer. The file is 4.25in x 5.50in, which is 50%, or ½ the original size of 8.50in x 11.00in. You can determine this by dividing the height in pixels by the vertical resolution and the width in pixels by the horizontal resolution - (1275/300) x (1650/300) = 4.5 x 5.5.
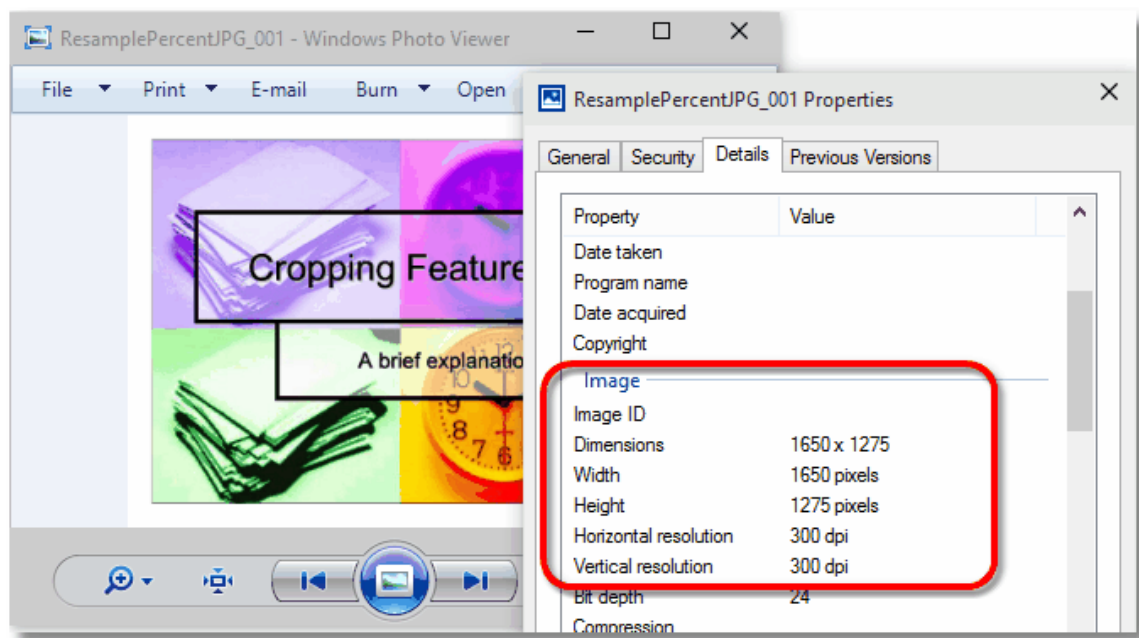
Resample Using Resolution

The steps below use the file pictured here to demonstrate resampling an image to a particular resolution, or dots per inch (DPI). An image can be resampled from 50 DPI up to 3600 DPI. The higher the resolution, the more space the image will take store on disk, and the more memory will be needed both to create and view the image.
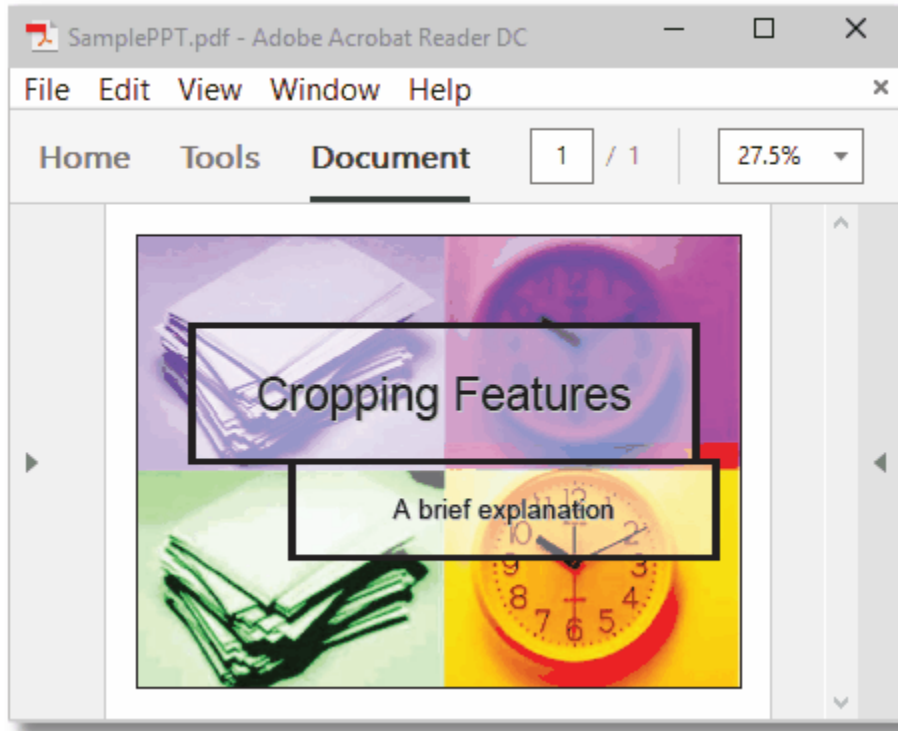
Step by Step Instructions

1. Select `File - Print` from your application; the example below uses Adobe Reader.
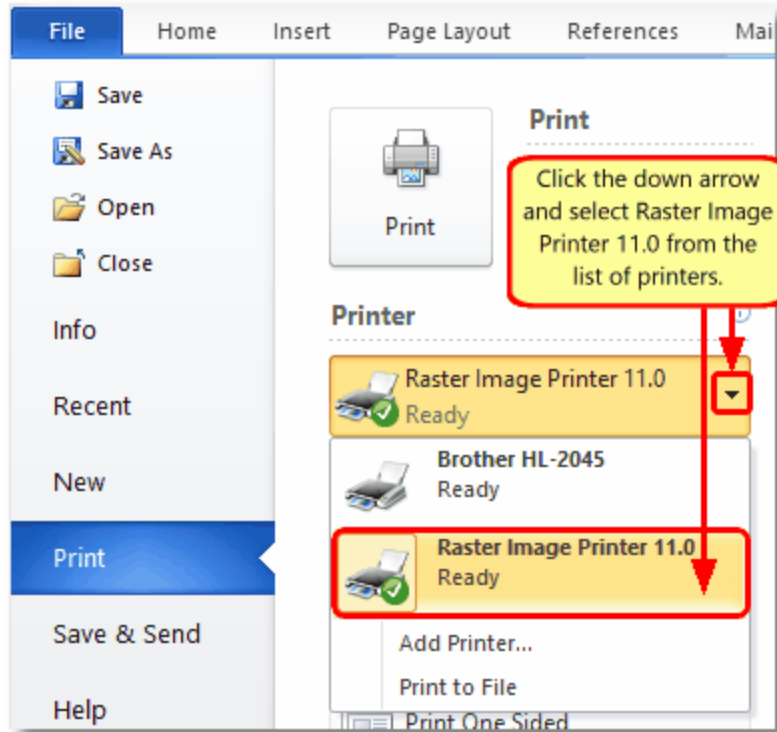
- In the printer field choose the Raster Image Printer 11.0 from the drop-down list of printers.
- Click the `Properties...` button to open the Raster Image Printer properties dialog box.
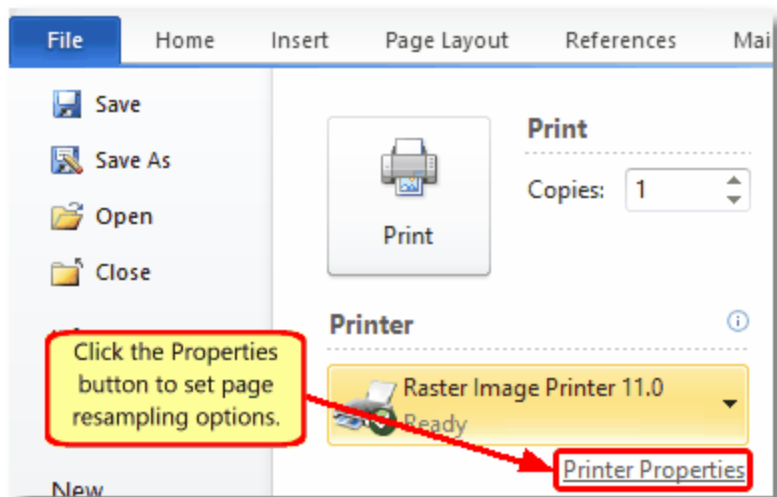
2. Click on the *Image Processing* tab in the `Document Properties` dialog to access the Resample options.
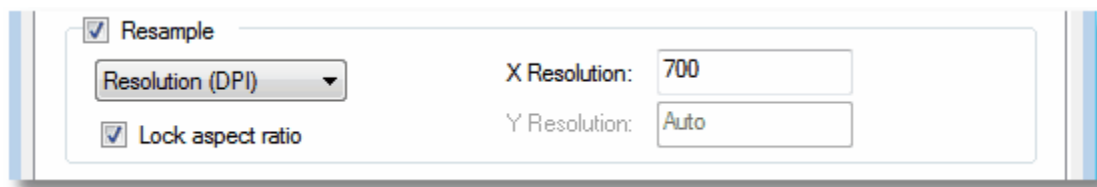
- Check the *Resample* check box to enable the resampling options.

- Select *Resolution (DPI)* from the drop-down list of resampling options.

- Enter in the resolution to resample the image to. You can enter any number between 50 DPI and 3600 DPI. For our sample page, we have checked the *Lock aspect ratio* check box and entered 700 DPI for the *X Resolution*, so 700 DPI will also be used for the *Y Resolution*. If you need a different resolution for the *Y Resolution*, uncheck the *Lock aspect ratio* check box and enter in the desired value*.

3. As the source document is a landscape oriented document, the *Orientation* of the printer needs to be changed to *Landscape* to match. If your source document is portrait, the *Orientation* needs to be set to *Portrait*.

- On the *Layout* tab, select **Landscape** from the *Orientation* drop down list.

4. Click the OK button on the Document Properties dialog to save the resample options.

5. Click the OK button on the Print Dialog, or the appropriate button on your application's print dialog, to send the document to the printer.

6. Choose where to save your JPG image from the Save Image File dialog.

- Use the *Save in:* field to choose a folder to store your JPG image. Your Documents folder, or any folder you have chosen on the Save tab will have been selected for you by default.

- In the *File name:* field, enter a name for your JPG image. A default name for your file has been filled in based on the name your application used when it printed your document to the Raster Image Printer. Here we have changed the file name to **ResampleJPG**.

- The *Save as type:* drop down list can be used to change the output file type if needed. In this example we are leaving it at the default of **JPEG (*.jpg)**.

- Click the Save button to create the file in the folder you chose.

7. Open the new JPG image in your Image viewer.

- The image is still 8.50in x 11.00in, but now has an X and Y resolution of 700 dots per inch(DPI). You can calculate this by taking the dimensions and dividing then by the DPI we requested. The result is the image size:

```
7700 pixels / 700 DPI = 11 inches
5950 pixels / 700 DPI = 8.5 inches
```

Extracting Text From the Created File

This feature will create a separate text file containing all of the textual elements of your printed document. These text files are often paired with the output files when stored in archival systems to allow searching and retrieval of the files using textual data. By default all of the text extraction files are stored in the same directory with the same base name as the original document. For example, creating a JPG image with a base name of *JanuaryMemo.jpg* will also create a file *JanuaryMemo.txt* containing all the text in file.

> ⚠️ **Text Extraction and Optical Character Recognition**
> The text extraction feature extracts as much text as it can from the printed document. This feature will not necessarily produce the same results as *Optical Character Recognition (OCR)* software. Any text formatting is approximate and may not completely match your original document.

All of the text extraction settings are controlled through the *Text Extraction* tab in the `Printing Preferences` dialog. Close any open applications that you will be printing from before making changes as not all applications will see your changes until they are re-started. Changing the text extraction settings using the following steps is a global change, meaning that all applications will use these options when printing to Raster Image Printer.

Step by Step Instructions

The steps below will set enable text extraction and create *UTF-8* encoded files. The *Physical* layout is used to try and match the format of the text in the original file as much as possible.

1. From the `Start` menu, go to `All Programs - Raster Image Printer 11.0 - Properties...`

2. Click the *Text Extraction* tab in the `Printing Preferences` dialog.
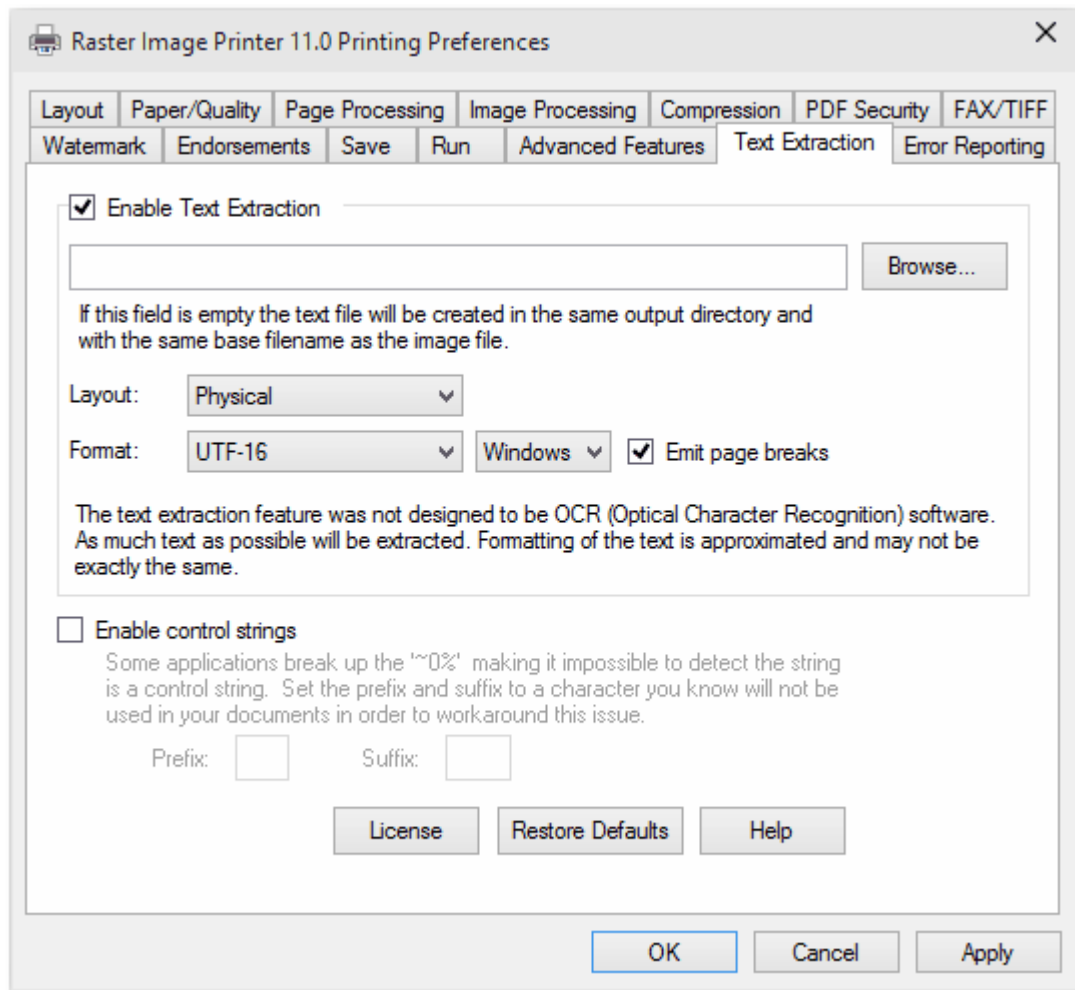
3. Check the *Enable Text Extraction* check box.
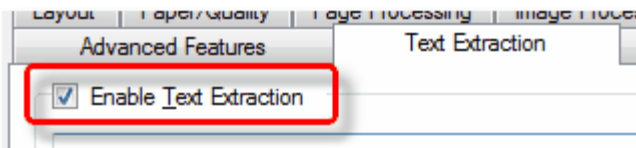
4. In the *Layout* drop down choose the *Physical* layout and choose *UTF-8* from the *Format* drop down. Leave the other options as they are.
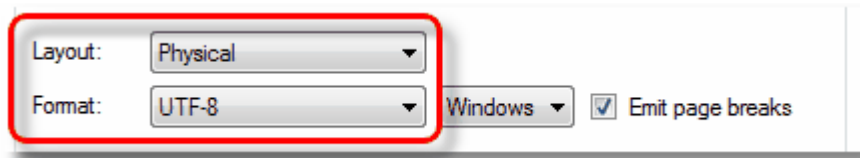
5. Click the Apply button and then the OK button to set the changes.

6. Printing to Raster Image Printer from any application will now also create a text file with the textual contents of the original file.

Working with Large Paper Sizes

Large paper sizes are commonly needed when CAD (computer aided design) software is being used. This type of software is often used by engineers and architects when making large scale drawings. Some applications require that you create custom forms, or paper sizes, in order to print to a particular paper size.

There are two ways to have Raster Image Printer use a larger paper size:

➢   Configure Raster Image Printer to Use a Custom Paper Size

➢   Adding a Custom Paper Form

Adding a Custom Paper Form

The following steps outline how to create a custom paper size or form and use it in your application. You will need to close your application before doing these steps.

> 💡 **Windows Vista and Windows 7 Permissions**
> On Windows Vista and Windows 7 operating systems you will need administrative permissions to add custom paper sizes.

Adding custom paper sizes on Windows 10, Windows Server 10

1. Close any open applications.

2. Go to Start – Control Panel to open Control Panel applet.
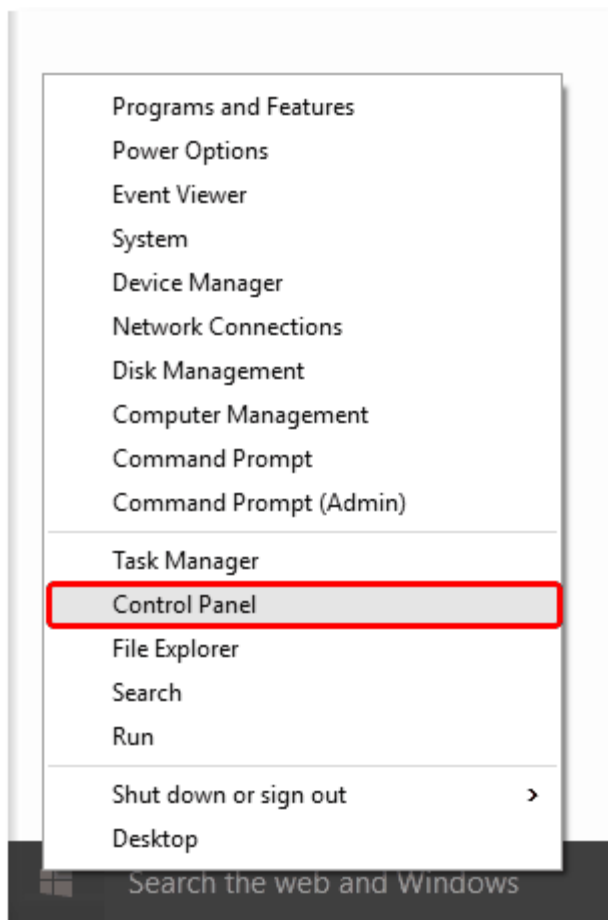
3. Click Administrative Tools.
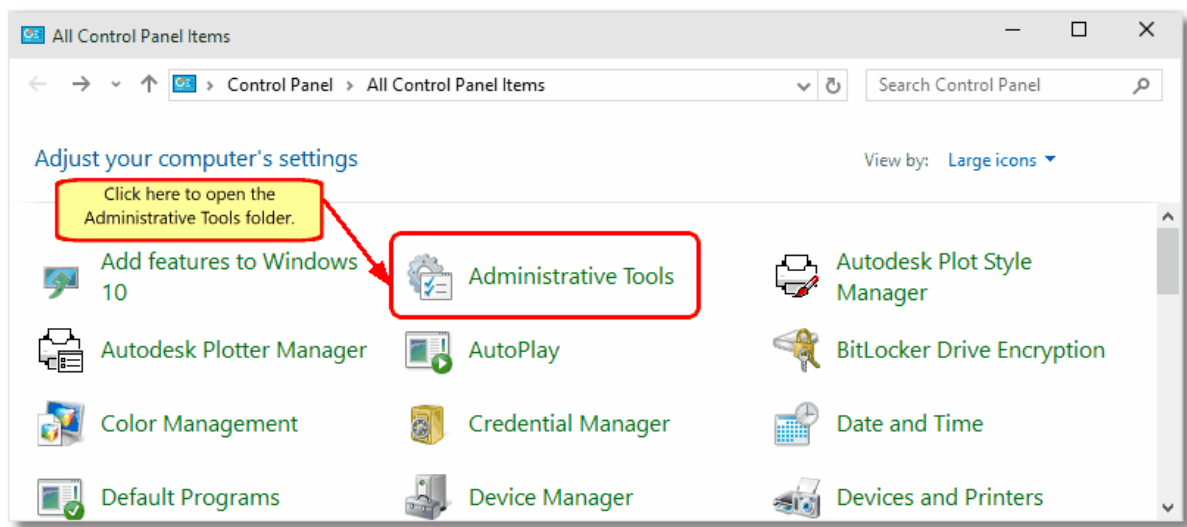
4. **Double-click** Print Management.
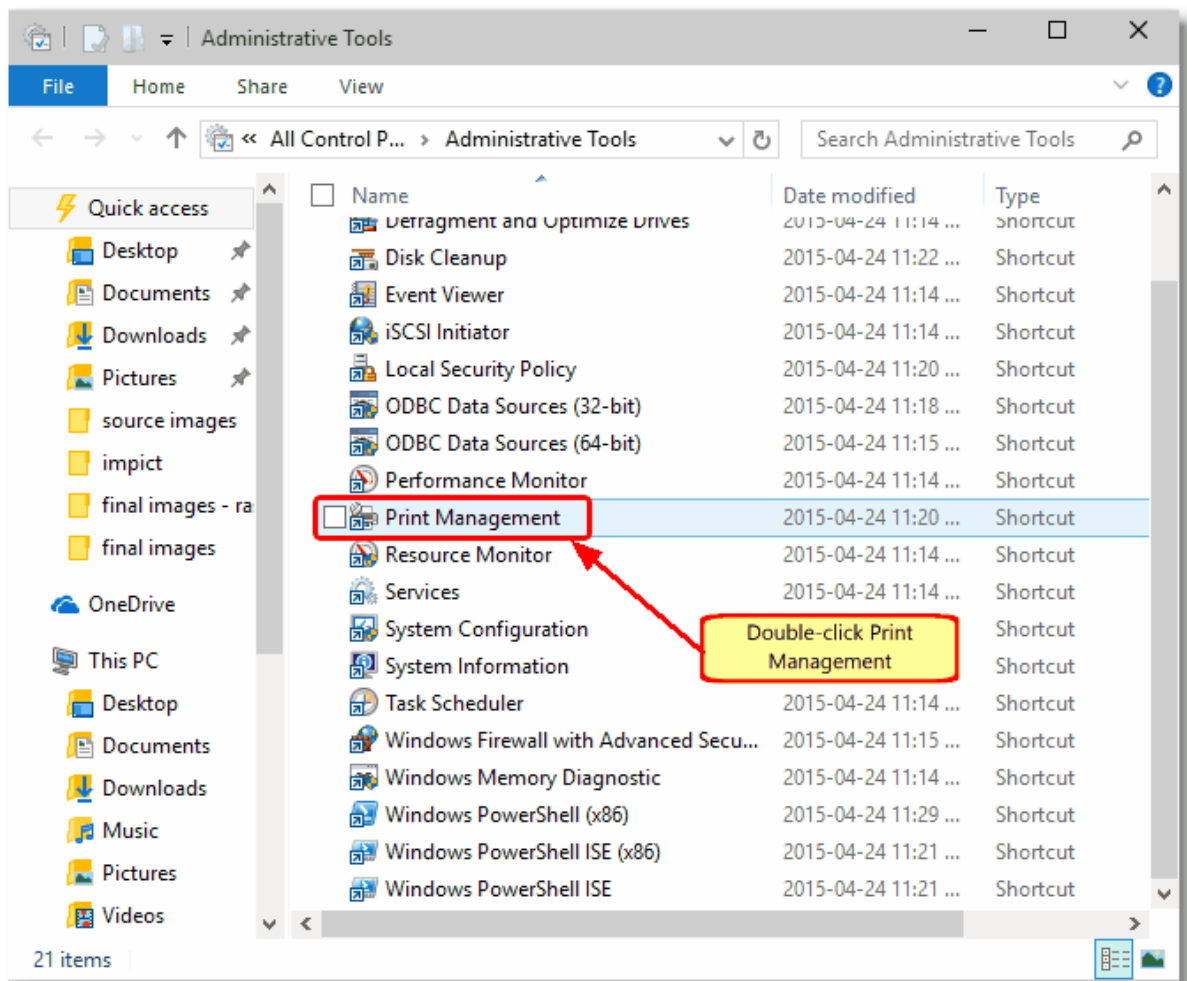
5. In the Print Management window, select Print Servers then select the name of your computer. Right-click on the Forms item, then select Manage Forms...
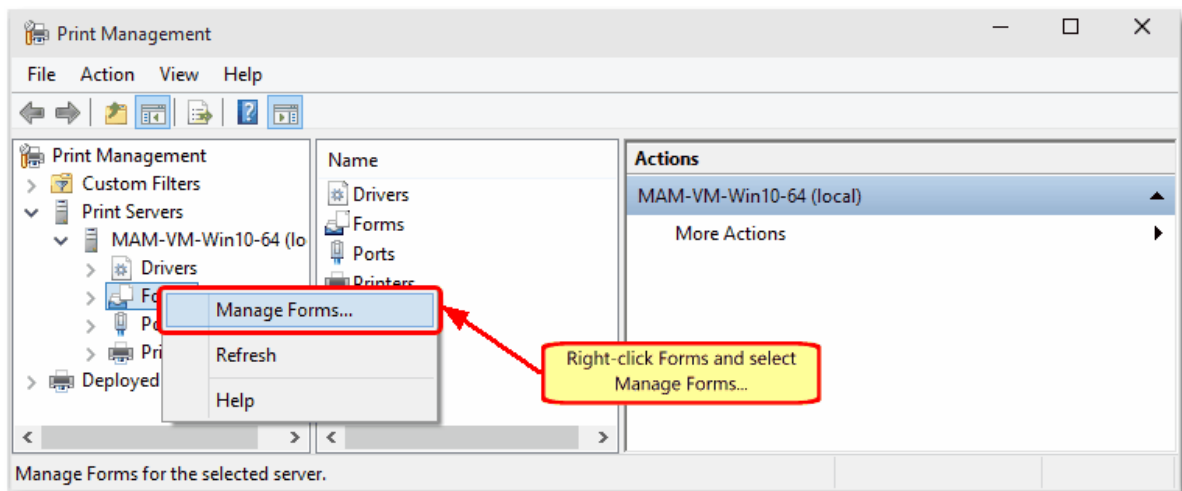
6. On the Print Server Properties dialog, go to the *Forms* tab.
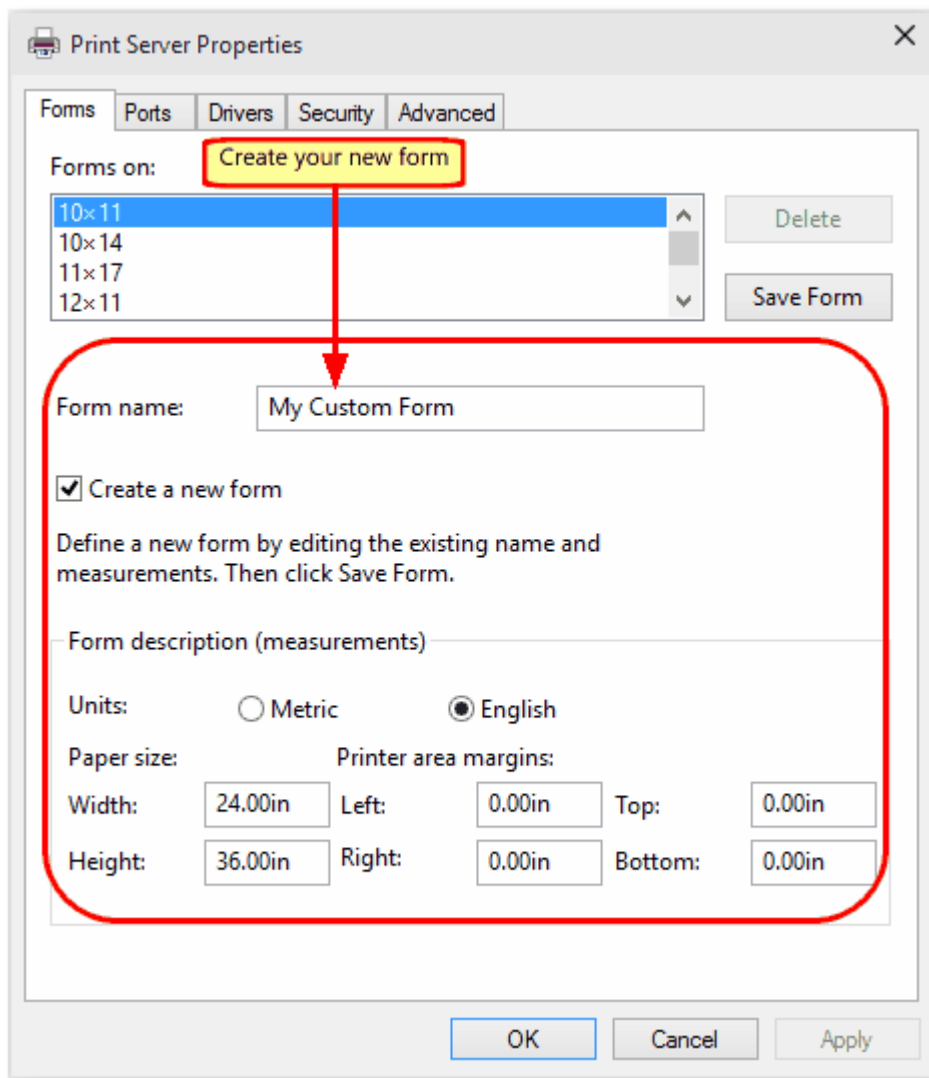
- Check the *Create a new form* check box to enable the form fields

- In the *Form name* field, type in a name for your new form, such as "*My Custom Form*".

- In the *Form description* section:

    - Set the *Units* to *Metric* (centimeters) or *English* (inches).

    - Set the *Paper Size Width* and *Height* to the desired valued. It is important to make your *Width* value less than your *Height* value, and to use the *Landscape* orientation property when printing.

    - Set any *Printer Area Margins* you need.

7. Click the Save Form button on the upper right corner of the tab, then click the OK button.

8. You can now use your new custom paper size in your application, or as a paper size on Raster Image Printer's Advanced Options dialog.
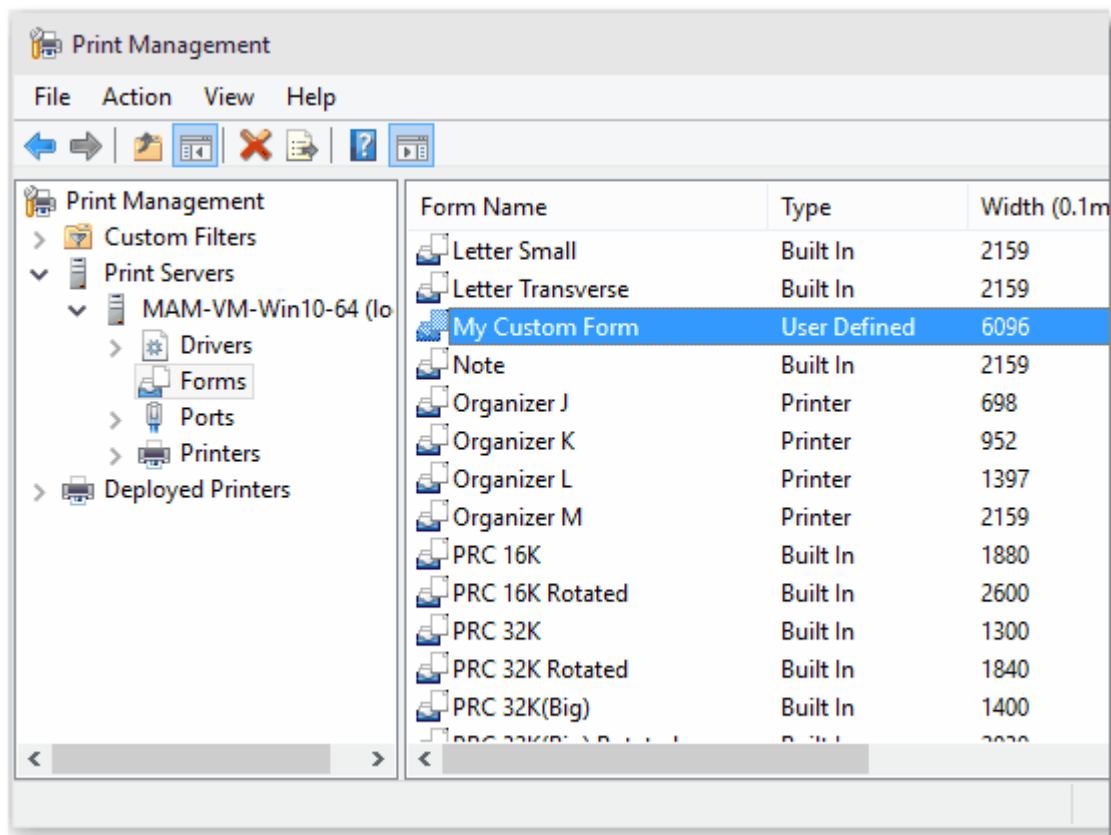
Adding custom paper sizes on Windows 7, Windows Server 2008 R2

1. Close any open applications.

2. Go to $Start - Control\ Panel$ to open $Control\ Panel$ applet.
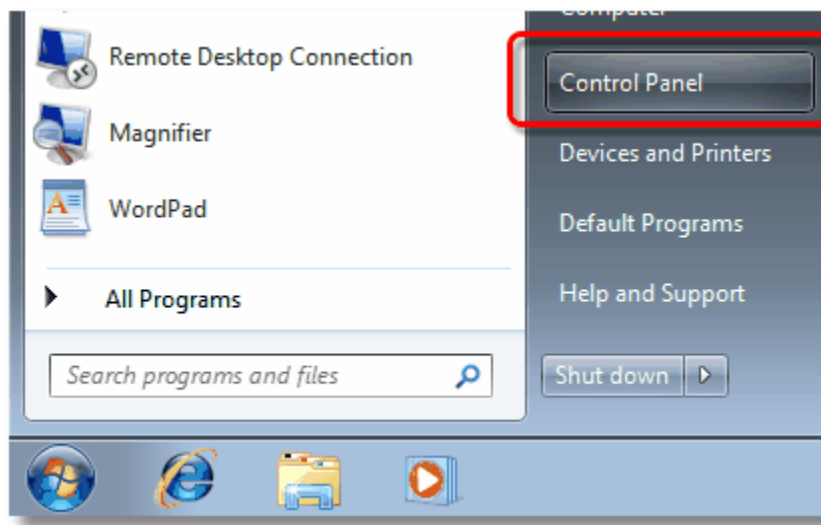
3. In the Control Panel applet click System and Security.
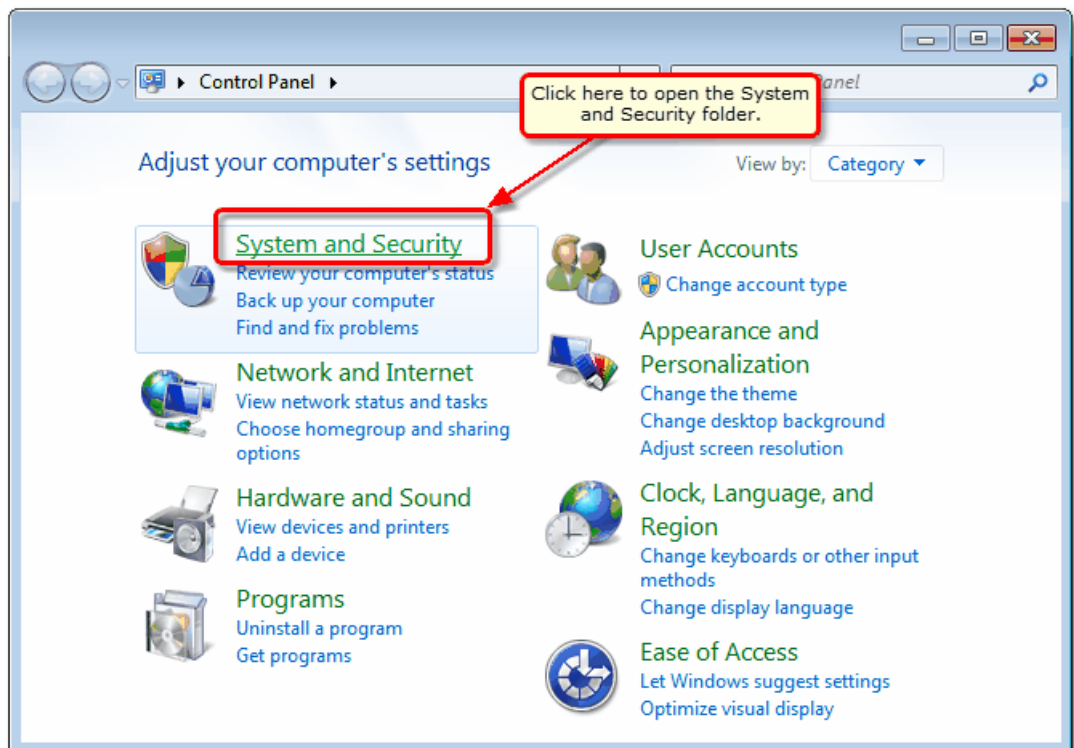
4. Click Administrative Tools.
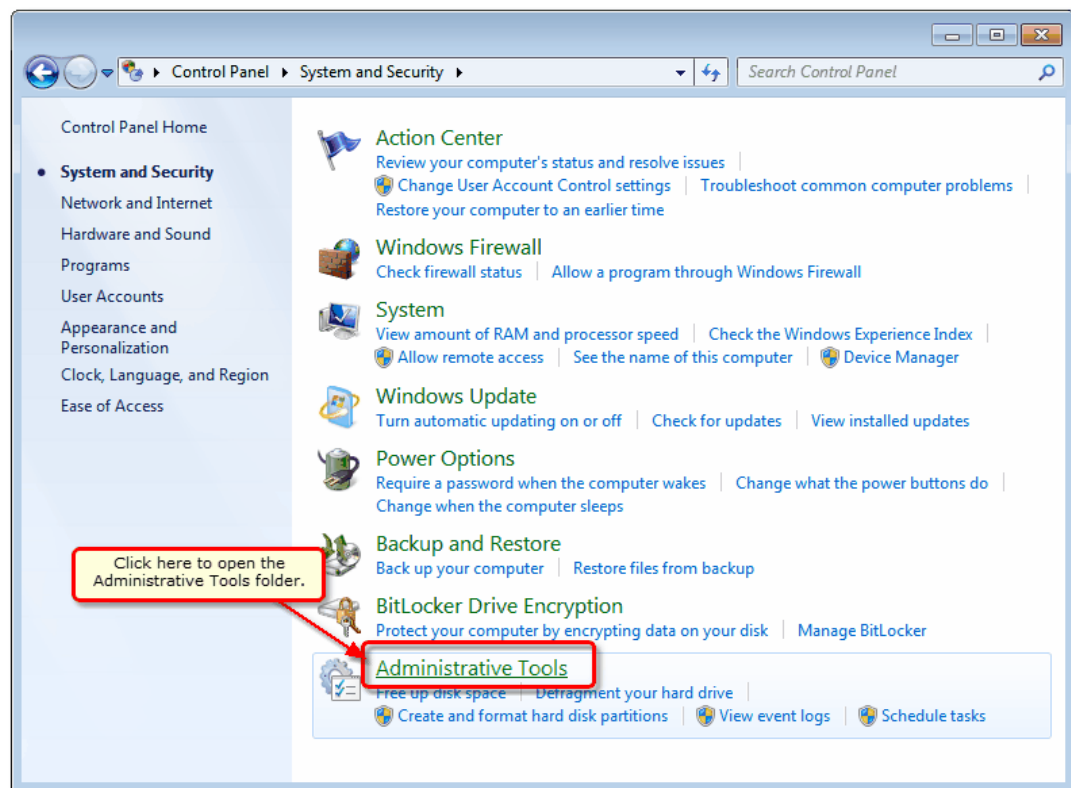
5. **Double-click** Print Management.
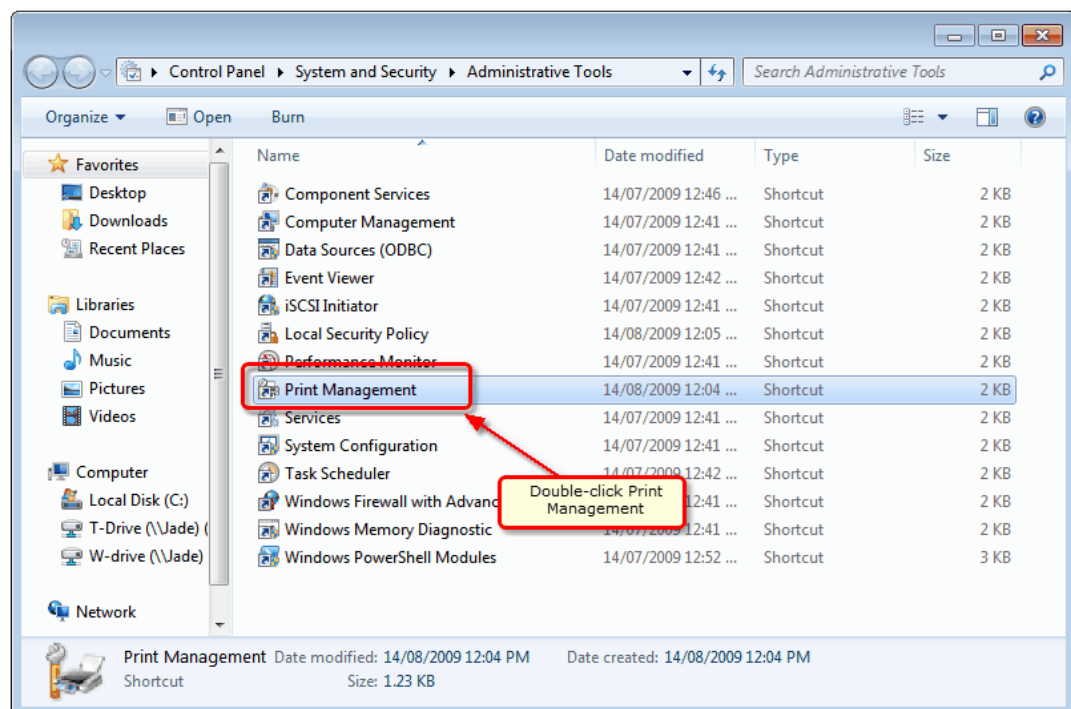
6. In the `Print Management` window, select `Print Servers` then select the name of your computer (in this example our computer is named *Andromeda*). Right-click on the `Forms` item, then select `Manage Forms…`.
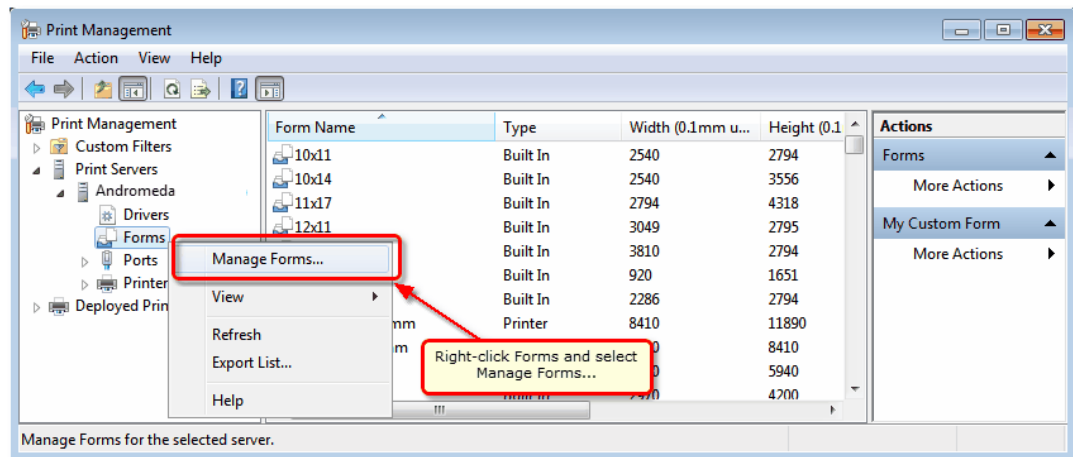
7. On the `Print Server Properties` dialog, go to the *Forms* tab.
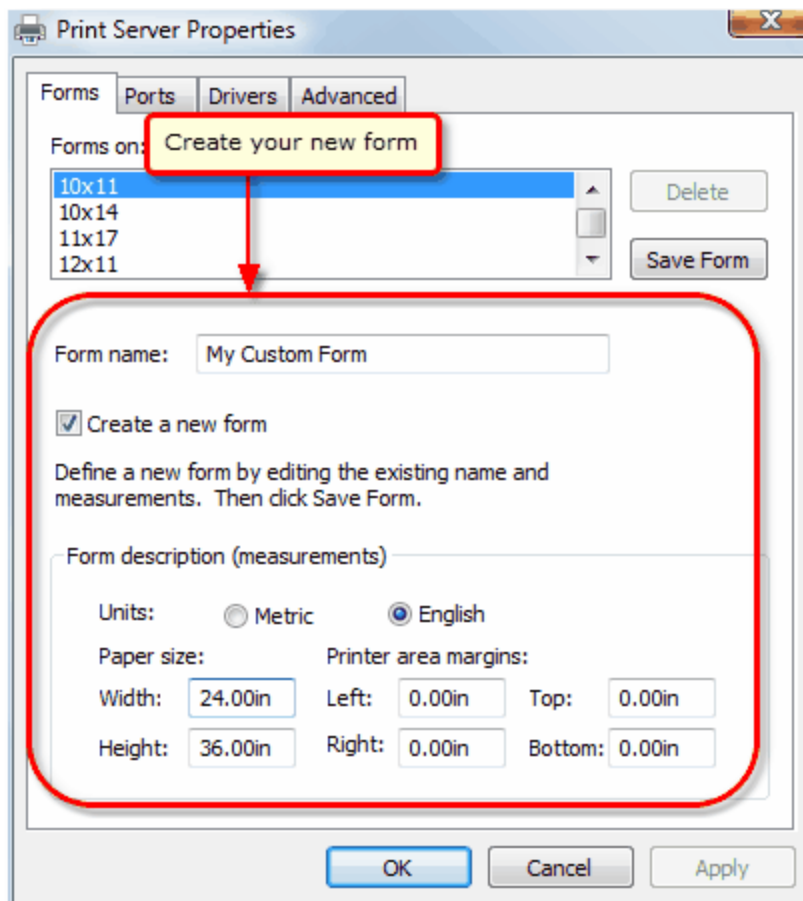
- Check the *Create a new form* check box to enable the form fields

- In the *Form name* field, type in a name for your new form, such as "*My Custom Form*".

- In the *Form description* section:

  - Set the *Units* to *Metric* (centimeters) or *English* (inches).

  - Set the *Paper Size Width* and *Height* to the desired valued. It is important to make your *Width* value less than your *Height* value, and to use the *Landscape* orientation property when printing.

  - Set any *Printer Area Margins* you need.

8. Click the Save Form button on the upper right corner of the tab, then click the OK button.

9. You will now see your new custom paper size in the list of forms available on your computer; it can now be used in your application, or as a paper size on Raster Image Printer's Advanced Options dialog.
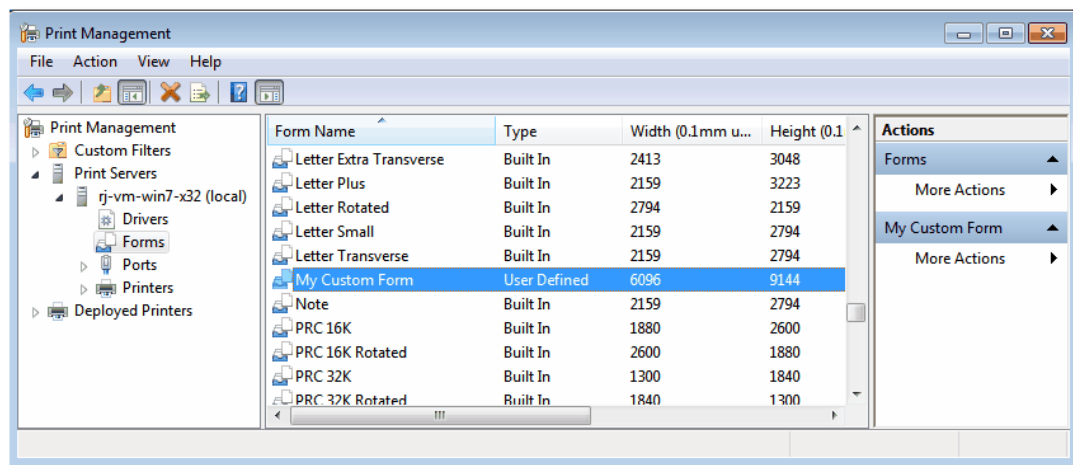
Adding custom paper sizes on Windows Vista, Windows Server 2008

1. Close any open applications.

2. Open the Printers folder from the Start – Control Panel – Hardware and Sound – Printer.

3. Right click in the window and select Run As Administrator – Server Properties...

from the context menu. If Vista's User Account Control (UAC) is enabled, click the `Continue` button at the UAC permission prompt.

4. On the `Print Server Properties` dialog, go to the *Forms* tab.

- Check the *Create a new form* check box to enable the form fields

- In the *Form name* field, type in a name for your new form, such as "*My Custom Form*".

- In the *Form description* section:

  ▪ Set the *Units* to *Metric* (centimeters) or *English* (inches).

  ▪ Set the *Paper Size Width* and *Height* to the desired valued. It is important to make

your *Width* value less than your *Height* value, and to use the *Landscape* orientation property when printing.

- Set any *Printer Area Margins* you need.

5. Click the `Save Form` button on the upper right corner of the tab, then click the `OK` button.

6. You can now use your new custom paper size in your application, or as a paper size on Raster Image Printer's [Advanced Options](#) dialog.

Adding custom paper sizes Windows XP, Windows Server 2003 or Windows 2000

1. Close any open applications.

2. Open the `Printers` folder from the `Start Menu`. If you do not have the `Printer and Faxes` icon in your start menu go to `Control Panel - Printers`.
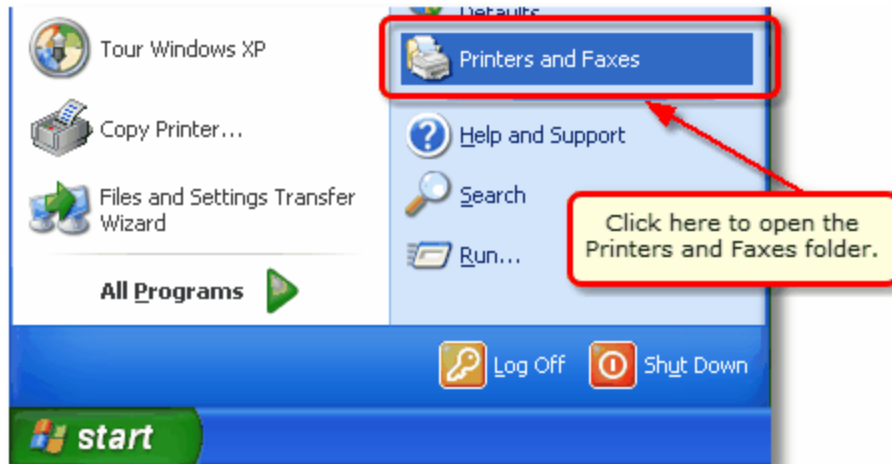
3. Select `File - Server Properties...` from the menu.
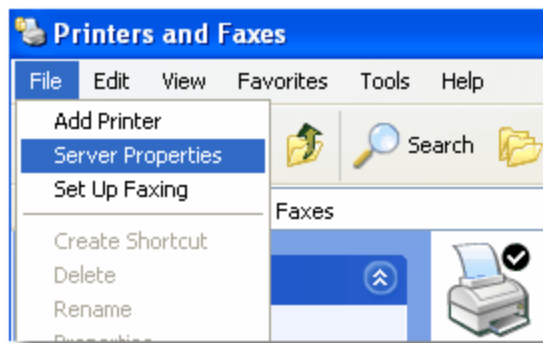
4. On the `Print Server Properties` dialog, go to the *Forms* tab.
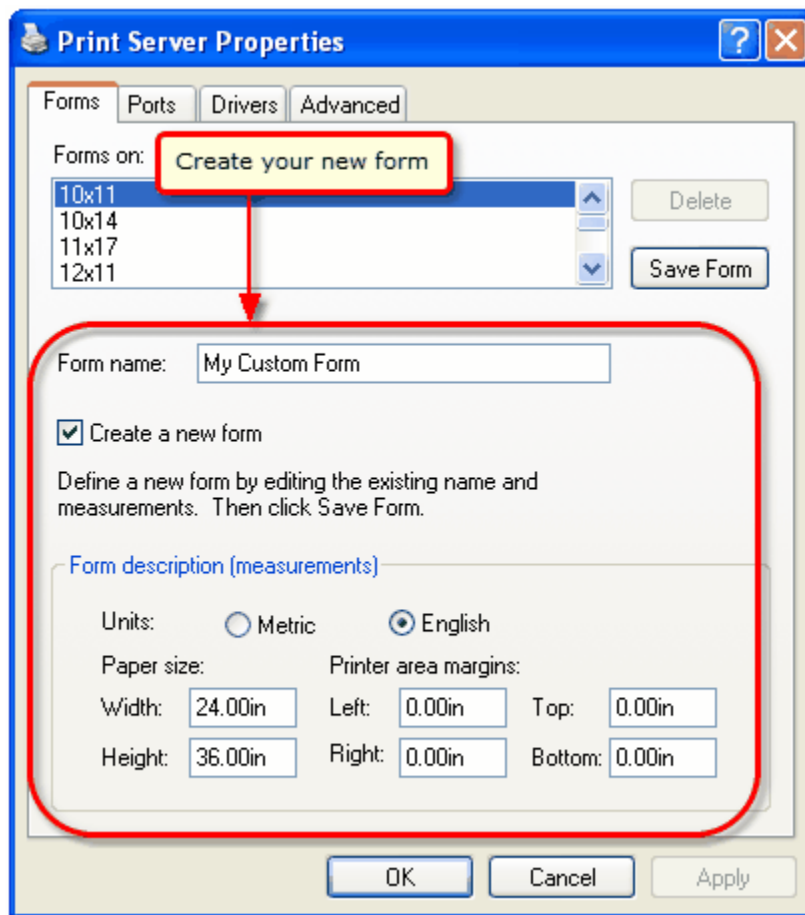
- Check the *Create a new form* check box to enable the form fields.

- In the *Form name:* field, type in a name for your new form, such as "*My Custom Form*".

- In the *Form description* section:

    ▪ Set the *Units* to *Metric* (centimeters) or *English* (inches).

    ▪ Set the *Paper Size Width* and *Height* to the desired valued. It is important to make your Width value less than your Height value. If your paper size is wider than it is high, you need to use the Landscape orientation property when printing.

    ▪ Set any *Printer Area Margins* you need.

5. Click the Save Form button on the upper right corner of the tab, then click the OK button.

6. You can now use your new custom paper size in your application, or as a paper size on Raster Image Printer's <u>Advanced Options</u> dialog.

Configure Raster Image Printer to Use a Custom Paper Size

The steps below will configure Raster Image Printer to use a custom paper size of 15" wide x17" high.

Close any open applications that you will be printing from before making changes as not all applications will see your changes until they are re-started. Changing the custom paper size settings using the following steps is a global change, meaning that all applications will use these options when printing to Raster Image Printer.

1. From the Start menu, go to All Programs - Raster Image Printer 11.0 - Properties...

2. Click the *Advanced Features* tab in the Printing Preferences dialog.
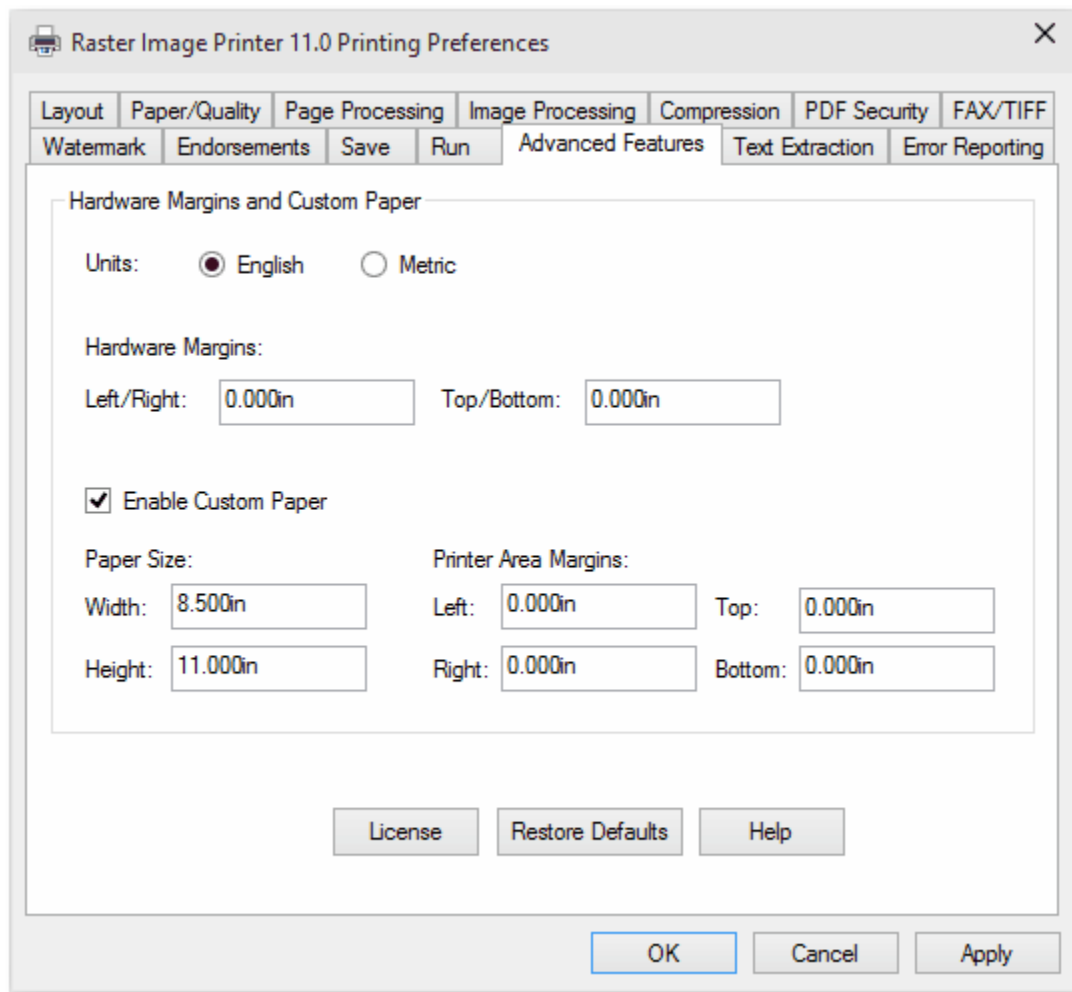
3. Check the *Enable Custom Paper* check box and enter in the *Width* and *Height* of the desired paper size. Here we are creating a custom paper size that is 15" wide by 17" high. The *Printer Area Margins* are left at 0.

4. Click the Apply button and then the OK button to set the changes.

5. Printing a document to the Raster Image Printer will now create a JPG image that is 15" wide and 17" high. You can determine this by dividing the width in pixels by the horizontal resolution and the height in pixels by the vertical resolution.

```
4500 pixels / 300 DPI = 15 inches
5100 pixels / 300 DPI = 17 inches
```
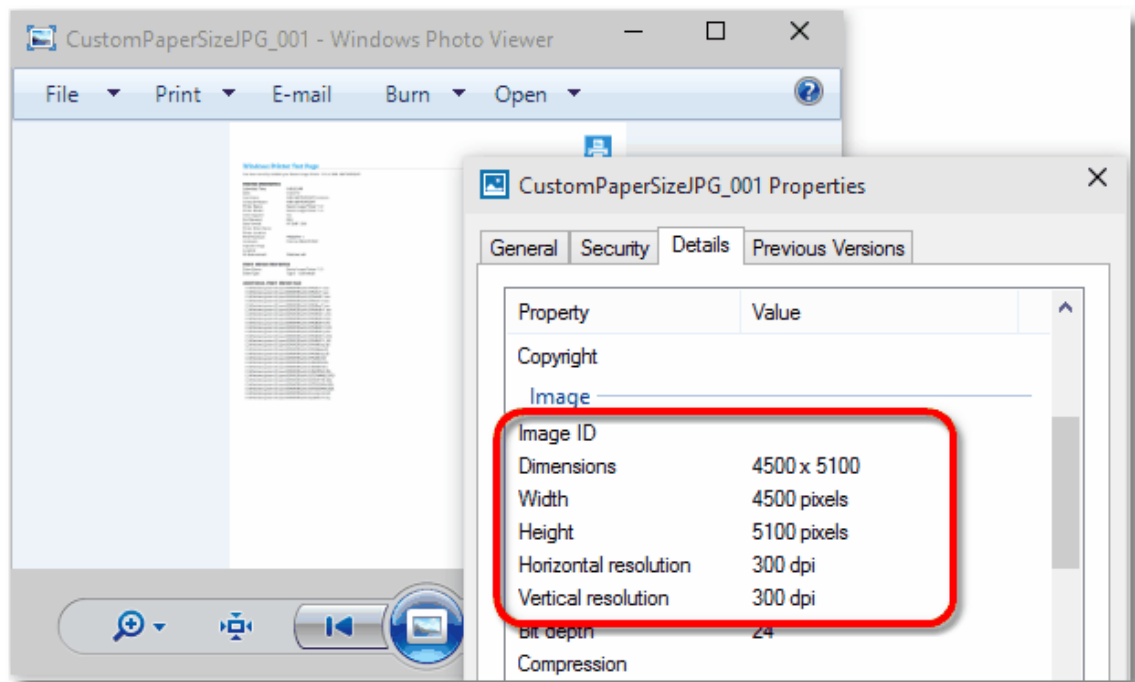
Raster Image Printer Properties Reference

This section contains technical documentation for each of the property pages found on the Printing Preferences dialog. There are numerous references to the instructions in the [Working with the Raster Image Printer](#) section so you can see step-by-step instructions to show you how to do what is being described.

Raster Image Printer is installed as a regular printer, also referred to as a *printer driver*, in the Printers folder and works just like a physical printer except that it can create JPEG, TIFF, PNG, non-searchable PDF files or many other image file formats on your computer instead of printing a paper copy of your document. Just as you would use the Printing Preferences on a LaserJet printer to change the size of the paper you are printing on, the options that control the JPG image output are set through the same dialog. This dialog is also available from the Print dialog within most applications.

Viewing Raster Image Printer Properties

On Windows 10, Windows Server 10

For quick access to the options, a menu item has been added to the Raster Image Printer menu in the Windows Start menu

You can access this menu item by going to All Programs - Raster Image Printer 11.0 - Properties...

Click here to set
Printing Preferences

You can also find the options by doing either of the following:

1. From the **Start** menu, type "*Printers*" in the Search box and press the Enter (or *Return*) key to open the **Devices and Printers** window, then follow from Step 4 below.

2. Or from the Start menu, select Control Panel.

3. Select Devices and Printers to open the folder.

4. Locate the `Raster Image Printer 11.0` in your list of printers and right-click the printer.

5. Select `Printing Preferences...` from the context menu to display the *Raster Image Printer 11.0 Printing Preferences* dialog. The tabs across the top of the dialog show the different settings that can be customized.

On Windows 7, Windows Server 2008 R2

For quick access to the options, a menu item has been added to the Raster Image Printer menu in the Windows Start menu

You can access this menu item by going to All Programs - Raster Image Printer 11.0 - Properties...

You can also find the options by doing either of the following:

1. From the **Start** menu, type "*Printers*" in the Search box and press the Enter (or *Return*) key to open the **Devices and Printers** window, then continue from Step 3 below.

2. Or from the Start menu, select Devices and Printers.

3. Locate the Raster Image Printer 11.0 in your list of printers and right-click the printer.

4. Select **Printing Preferences...** from the context menu to display the *Raster Image Printer 11.0 Printing Preferences* dialog. The tabs across the top of the dialog show the different settings that can be customized.

On Windows Vista, Windows Server 2008

For quick access to the options, a menu item has been added to the Raster Image Printer menu in the Windows Start menu

You can access this menu item by going to All Programs - Raster Image Printer 11.0 - Properties...

You can also find the options by doing either of the following:

1. From the **Start** menu, type "*Printers*" in the Search box and press the Enter (or *Return*) key to open the **Printers** folder, then continue from Step 4 below.

2. Or from the Start menu, select Control Panel.

3. Click on the *Printer* option in the Hardware and Sound section

4. Locate the Raster Image Printer 11.0 in your list of printers and left-click to select it.

5. Click on *"Select printing preferences"* in the toolbar, or right-click the printer and select Printing Preferences… from the context menu to display the *Raster Image Printer 11.0 Printing Preferences* dialog. The tabs across the top of the dialog show the different settings that can be customized.

On Windows XP or Windows Server 2003

For quick access to the options, a menu item has been added to the Raster Image Printer menu in the Windows Start menu.

You can access this menu item by going to All Programs - Raster Image Printer 11.0 - Properties…

You can also find the options by doing the following:

1. From the Start menu, select Printers and Faxes.

2. Locate the Raster Image Printer 11.0 in your list of printers and left-click to select it.

3. Right-click on the printer and select Printing Preferences... from the context menu to display the *Raster Image Printer 11.0 Printing Preferences* dialog. The tabs across the top of the dialog show the different settings that can be customized.

Setting Global Defaults

Global defaults are the default properties for all users of the printer. To set printing defaults you must have the appropriate security privileges.

1. Open the Printers folder.

2. In the `Printers` folder, right-click Raster Image Printer and select `Properties`.

3. On the *Advanced* tab, click the `Printing Defaults` button.

Layout

The Layout tab is used to select the paper size, print quality, orientation and page order of your output file.

Some of these options can be overridden by the settings chosen in other tabs. For instance, if you have *Orientation* set to *Portrait* but have also set rotation options for portrait pages on the Page Processing tab, the settings on the *Page Processing* tab will be used instead.
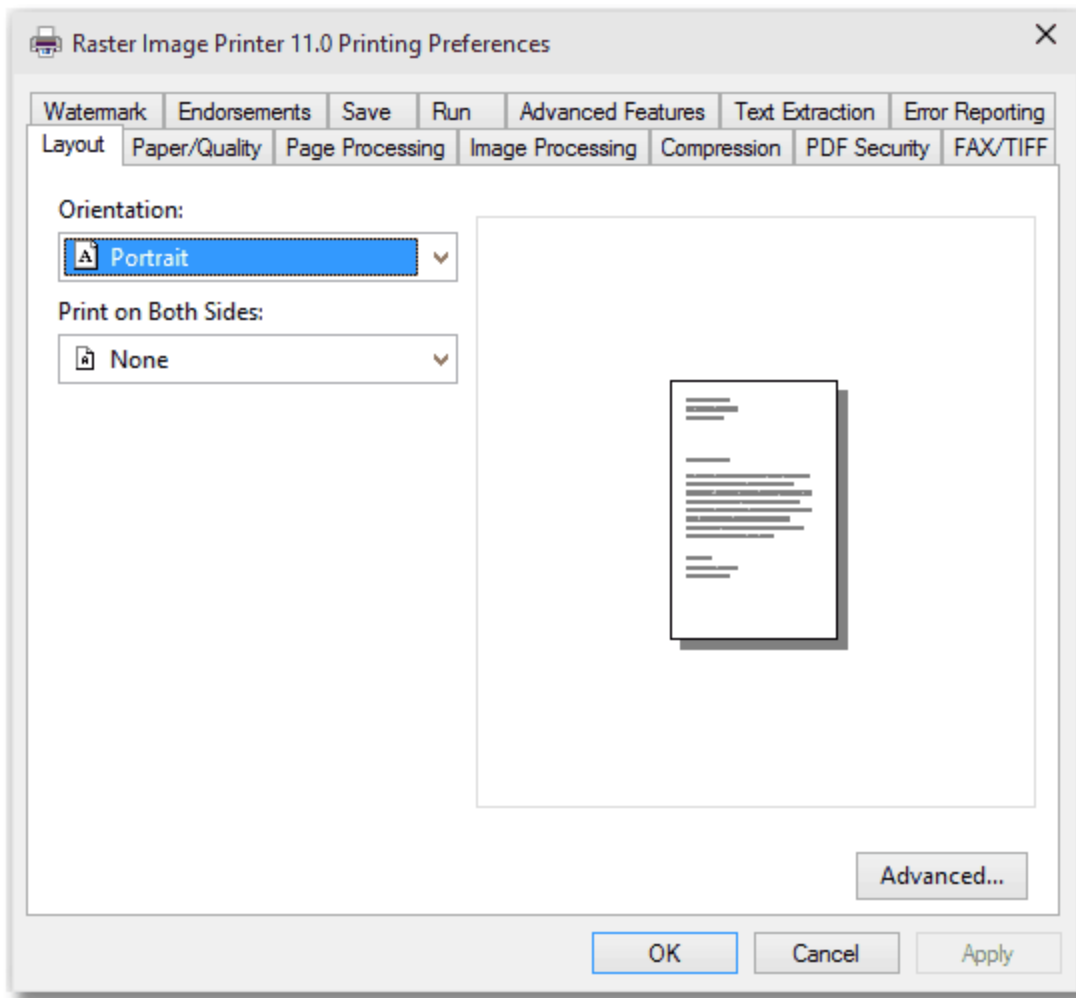
Orientation

Specifies how the document is positioned on the page.

- *Portrait* orients the paper vertically.

- *Landscape* rotates the paper 90° clockwise.

Print on Both Sides

This option has no effect on the output file created. It can, however, be used by other applications that support duplex, or double sided, printing. A common use for this option is to determine how to position the page number, which is often placed on opposite sides of the page in duplex mode.

- *None* - duplex printing is not enabled.

- *Flip on Long Edge* - duplex printing is enabled, pages are flipped on the side, or long edge, of the paper, or

- *Flip on Short Edge* - duplex printing is enabled, pages are flipped on the bottom, or short edge, of the paper.

Advanced...

Opens the Advanced Options dialog box where you can select the paper size and print quality(DPI) of your output file as well as the color mode.

Paper/Quality

The Paper/Quality tab is used to select the color of your JPG image. This option can be overridden by the *Color Reduction* option in the <u>Save</u> tab or through some of the fax mode settings on the <u>FAX/TIFF</u> tab.

> **Tip:**
> To convert documents to black and white while maintaining the highest possible image quality, select *Color* on this tab and choose *Reduce to black and white* on the <u>Save</u> tab.
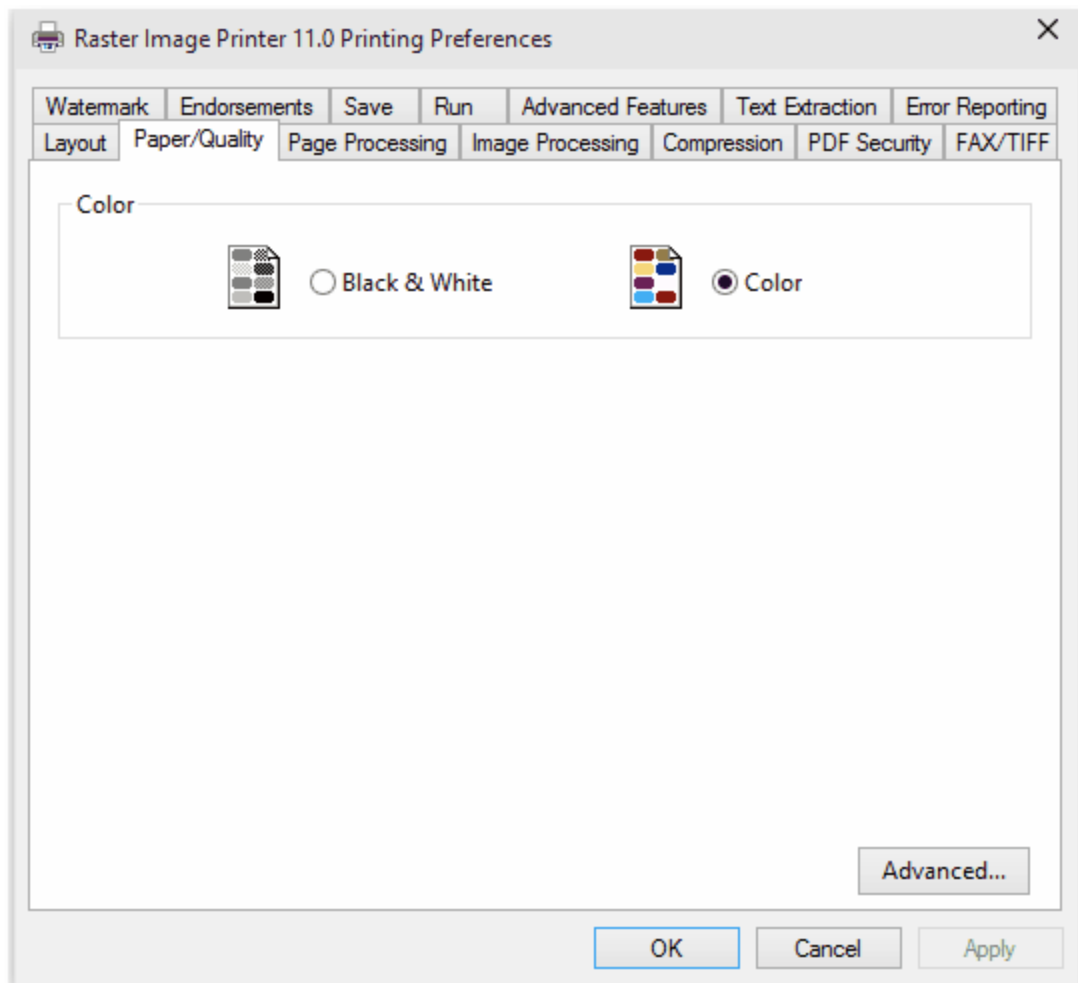
Color

Defines the color mode in which the input is sent to the printer.

- *Black & White* - Source file is sent to the printer as black and white, or monochrome.
- *Color* - Source file is sent to the printer as color.

This only controls how the source file is sent to the printer; the other settings on the various driver properties tabs will determine the color mode of the output file.

If fax mode is enabled on the FAX/TIFF tab and you are creating a Profile S or Profile F fax format image, the color option is ignored and a black and white file will be created instead.

The setting for the Color Reduction option on the Save tab can also override the color setting chosen here. If you are printing in color and have chosen to *"Reduce to black and white"* you will end up with a monochrome output file.

Advanced...

Opens the Advanced Options dialog box where you can select the color mode as well as the paper size and print quality(DPI) of your image or file.

Advanced Options

The Advanced Options tab displays all of the options already presented on the Layout and Paper/Quality tabs, along with some new options. It is from this tab that you can set the *Paper Size* which controls the dimensions of each page in the output file you are creating. Also available from here is the *Print Quality* or resolution used by the printer. Print Quality is also often referred to as **DPI**, which stands for **D**ots **P**er **I**nch.
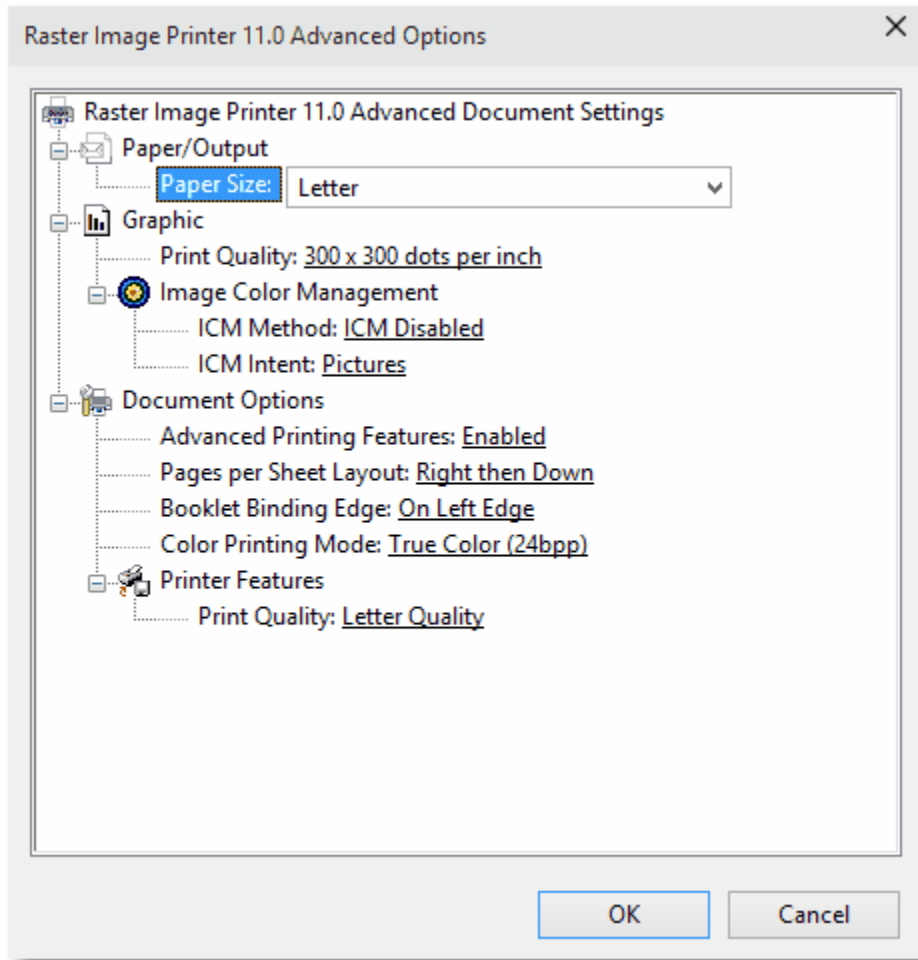
Paper Output

Defines the dimensions of each page in the output file.

Paper Size:

Allows you to choose the page size of the pages in your output file. Depending on your regional settings, this normally defaults to Letter (or A4 for Europe and the UK). Clicking the underlined text will display a list of paper sizes to choose from. Raster Image Printer supports all standard international sizes. If you want to use a custom paper size instead, add a custom paper size as shown in the Adding custom paper sizes section, or use the custom paper option on the Advanced Features tab.
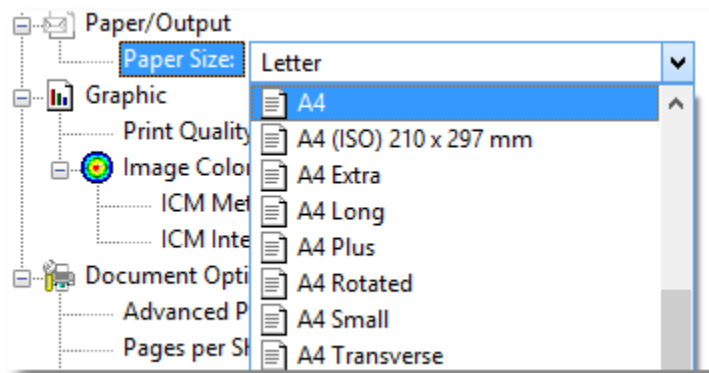
Graphic

Specifies the print resolution, or **DPI** (Dots Per Inch) of the output file. Higher resolutions produce graphic images that are sharper and show finer detail, but are also very large if they are not compressed. Low-resolution images are not of as high a quality, but they take up less disk space. In general, Raster Image Printer will perform a readable text conversion at any resolution. If your document contains graphics, you may want to use one of the higher resolution settings.

Print Quality:

Click the underlined text to choose a resolution from the drop-down list. The screenshot below only shows a portion of the available resolutions; you can choose from 50 x 50 dots per inch up to 1200 x 1200 dots per inch.
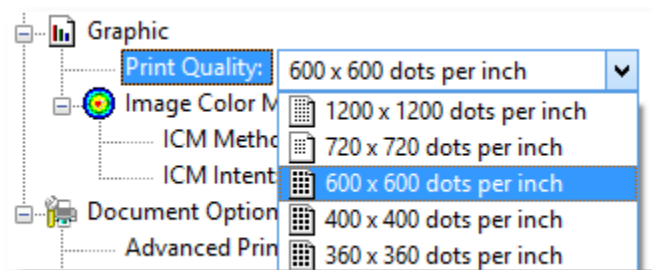
Document Options

Lists available options for printing. Only the **Color Printing Mode** option is used by Raster Image Printer; the other Document Options settings are ignored.

Color Printing Mode:

This option reflects the Color settings chosen on the Paper/Quality tab. Changing the Color Printing Mode here will also change it on the Paper/Quality tab.
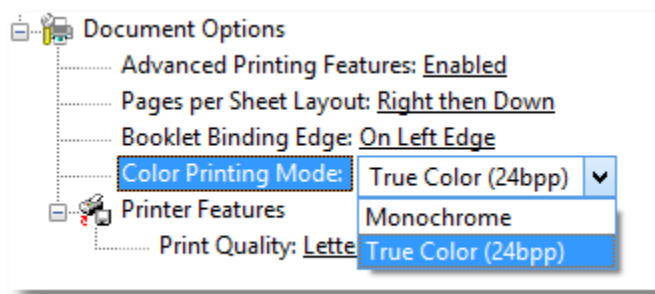
Printer Features - Print Quality:

This option is not used by the Raster Image Printer.

Page Processing

Page processing allows you to modify each page of the document. The options shown here are applied to each page of the file before any further processing, such as Image Processing, FAX/TIFF or Watermark options are applied.

The following properties allow you to set the driver's automatic cropping and trimming features. They can be used separately, or in conjunction with one another, to refine the image and change its dimensions during the output process.
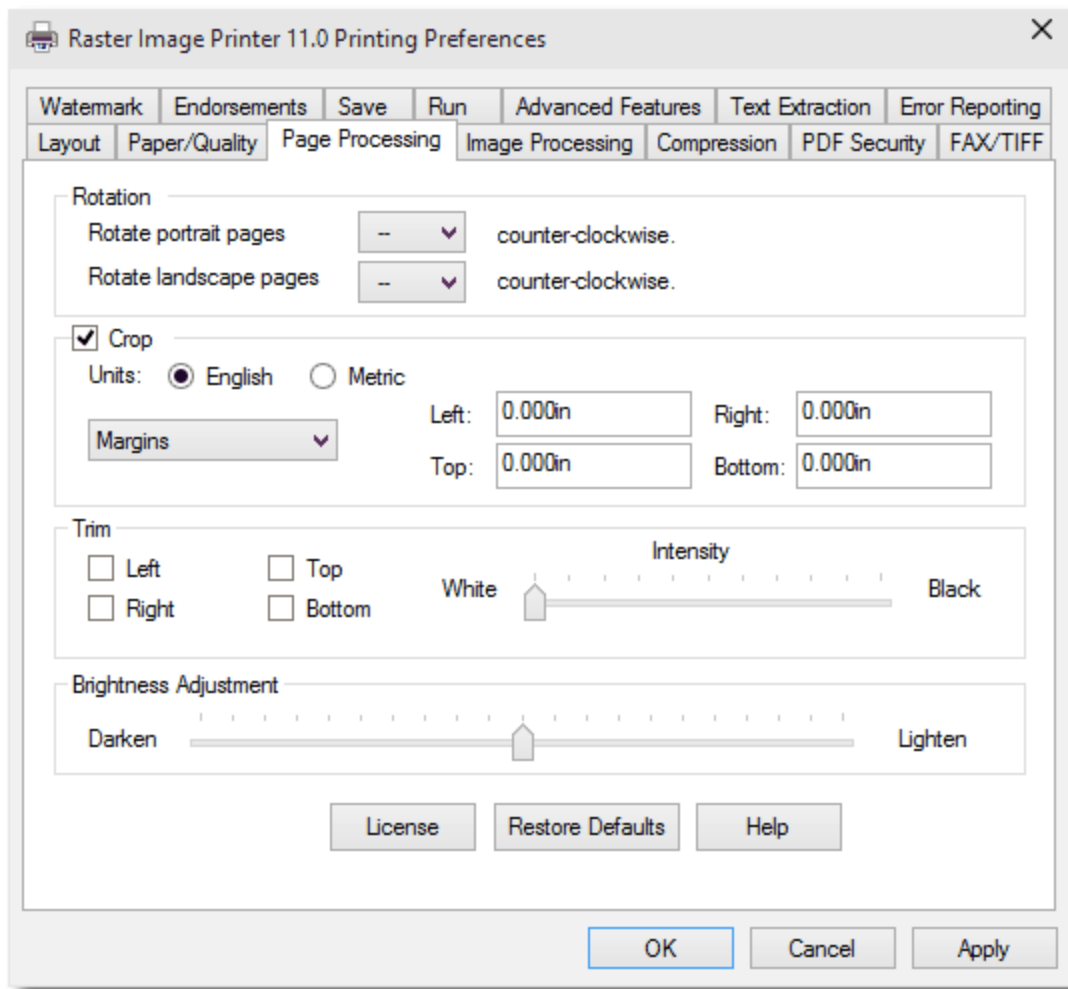
Rotation

Set any rotation options for the incoming pages before they are put into the output file. This is in addition to any rotation performed by the application you are printing from.

Rotation options can be set separately for *Portrait* and *Landscape* oriented pages.

- Pages can be rotated 0°, 90°, 180°, or 270° counter-clockwise

- If a dash (-) appears, no extra rotation will be done.

Crop

Sets any cropping options you want to apply to the incoming pages. The concept of image cropping is comparable to scissors that cut away sections of paper. In this case, the Raster Image Printer removes portions of the image and leaves a remaining visible area that is smaller than the original.

If any rotation is chosen, cropping is applied as if the page was not rotated. For example, rotating a portrait page 90° counter-clockwise and cropping a 1" margin from the *Top*, will crop a 1" margin off the left hand side of the rotated page, which was originally the top of the page.

Cropping can be specified in either of two ways: as page *Margins*, or as a central *Area or Region* on the page.

Crop:
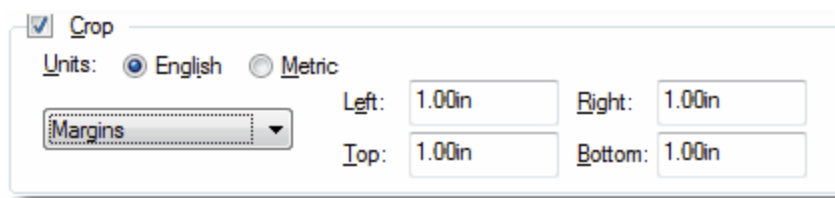
Check this box to enable the cropping options.

Units:

Determines the unit of measure used to enter any cropping options. Choose *English* to enter the cropping measurements in inches or *Metric* to enter the units in centimeters.

You can enter units with up to three digits of accuracy, or to an eighth of an inch (0.125in or 0.318cm).

Margins:

Enter the desired measurements, in *inches* or *centimeters*, to crop margins of that width from the *Left*, *Top*, *Right* or *Bottom* of the image.

If all four fields, *Left*, *Top*, *Right* and *Bottom*, are 0.00in then no cropping is performed.

Here, we are cropping a 1.00in margin on each side of the page. The darker part of the image shown is the result.

Area or Region:

Enter the desired measurements, in *inches* or *centimeters* to crop out a section of the page.

- The *Left* and *Top* are the starting points for your cropped area, the left- and topmost edges of the remaining visible area.

- The *Width* and *Height* are the actual dimensions of the area you want to crop from the original page.

If all four fields, *Left*, *Top*, *Width* and *Height*, are 0.00in then no cropping is performed.

Here we are cropping a 6.00in x 5.00in area that is 2.00in from the left and top of the page. The darker part of the image shown is the result.
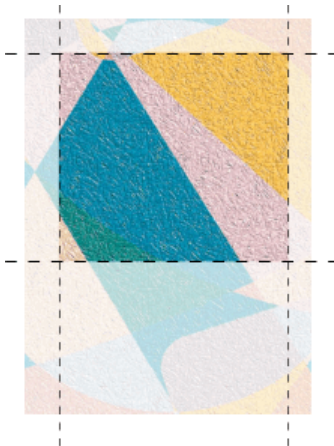
See Also: Using the Crop Features

Trim

Trimming is similar to cropping. Raster Image Printer will automatically remove all areas on the chosen sides (*Left*, *Right*, *Top* or *Bottom*) of the image that fall at or below the chosen *intensity level*.

The *intensity level* is used to decide what pixels get thrown away. Colors are converted to a grayscale palette, and then compared to the chosen intensity level. Trimming on any side stops as soon as a pixel is encountered that is greater the chosen level.

Left/Right/Top/Bottom:

Check the appropriate box for the side or sides of the document to be trimmed

Intensity:

Move the thumb control on the slider to the left or right to set the intensity level desired. When the intensity is set all the way to the left on White(0), only pure white pixels will be removed. The higher the intensity, the more colors will removed. If the intensity is set to Black(100), the entire page will in effect be "trimmed", and the trimming operation is abandoned.

See Also: Using the Trimming Features

Brightness Adjustment

This allows you to lighten or darken the images or text on your incoming pages. Darkening the page can help to make light colored text more readable, or, reversely, lightening a page can make a dark image more visible.

Move the thumb control on the slider to the left or right to adjust the Brightness.
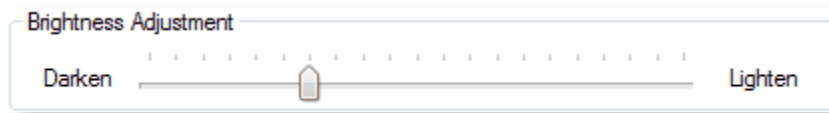
License

Launches the *Activation Wizard* as described in the Activating Raster Image Printer section if you are in trial mode.

If you have already activated Raster Image Printer , you will see a summary of your license information (see Viewing Your Activation Status for more details)

Restore Defaults

Restores this tab's settings back to the defaults when the driver was first installed.

Help

Brings up the on-line help for this tab.

Image Processing

Image processing allows you to:

➢ use the Copy To feature to copy each page of the document to a larger or smaller page

➢ use the Resample options to change the size of the output image

The options shown here are applied to each page of the file after any previous processing, such as Page Processing, FAX/TIFF or Watermark options, are applied.
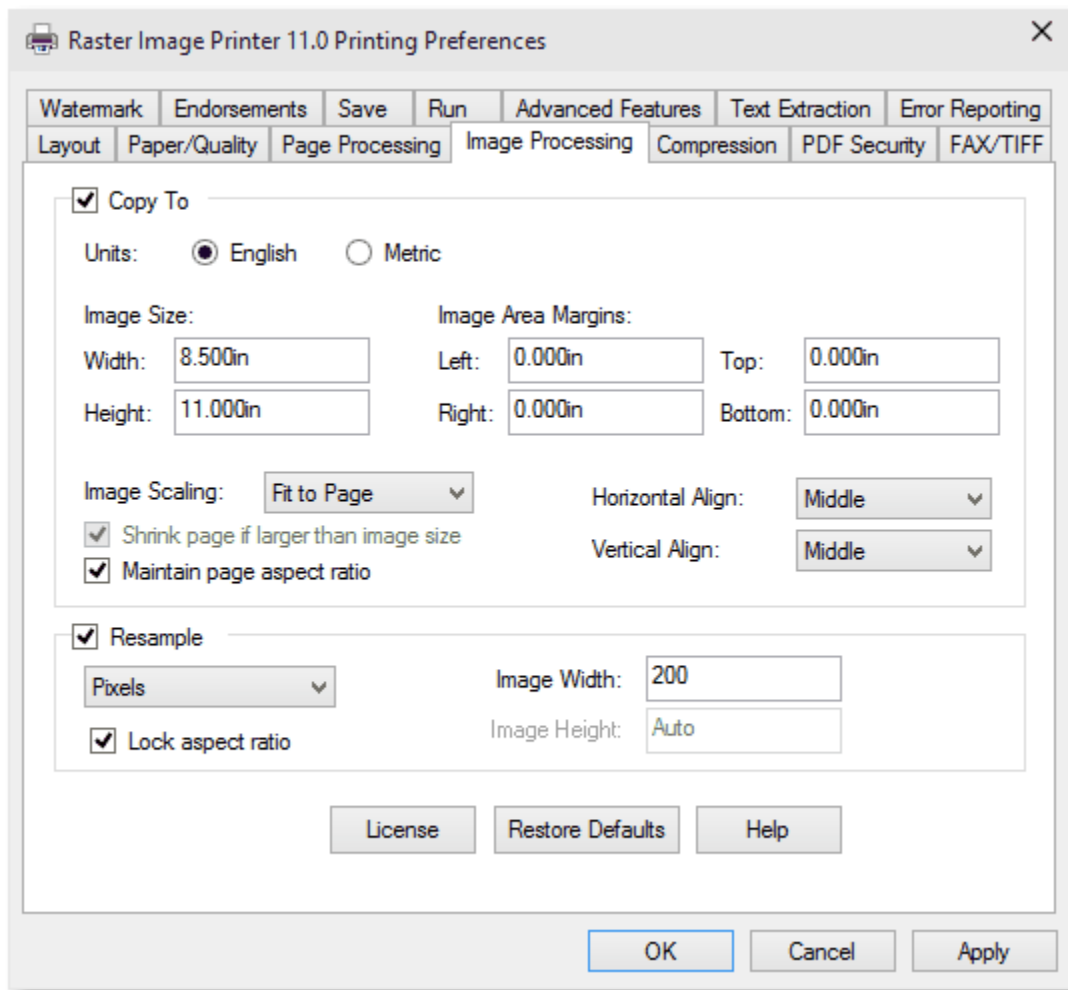
Copy To

Sets any copying options you want to apply to the outgoing pages

The concept of image copying is similar to enlarging or shrinking a page using a photocopier, with the added ability to position the page on the new image using the scaling and alignment options.

For instance, you could output an Tabloid-sized page, 11"x17", and copy it to a 8.5"x11" sized image with the original page contents centered on the new image.

Copy To:

Check this box to enable the Copy To options.

Units:

Determines the unit of measure used to enter any *Image Size* and *Image Area Margin* dimensions. Choose *English* to enter the cropping measurements in inches or *Metric* to enter the units in centimeters.

You can enter units with up to three digits of accuracy, or to an eighth of an inch (0.125in or 0.318cm).

Image Size:
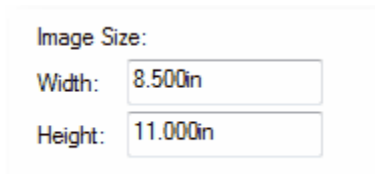
Image Size:
Width: 8.500in
Height: 11.000in

The *Width* and *Height* are the actual dimensions of the new image.

Image Area Margins:
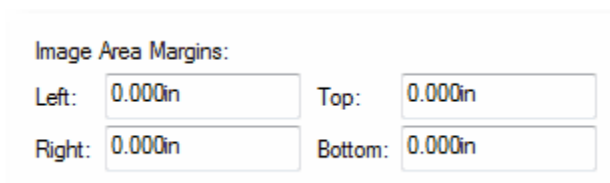
Image Area Margins:
Left: 0.000in   Top: 0.000in
Right: 0.000in   Bottom: 0.000in

Enter the desired *Left*, *Right*, *Top*, and *Bottom* image area margin settings for the new image The original page will be copied inside this area using the scaling options as selected.

The combined *Left* and *Right* image area margins must be less than the *Width* of the new page. The combined *Top* and *Bottom* image area margins must be less than the *Height* of the new page.

Image Scaling:
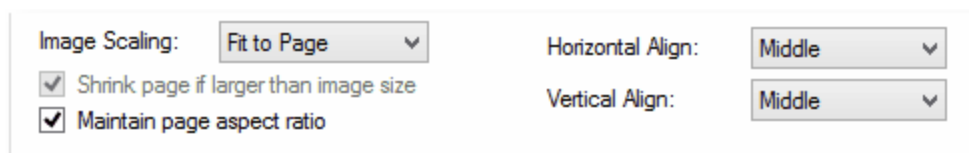
Image Scaling: Fit to Page   ▾   Horizontal Align: Middle   ▾
☑ Shrink page if larger than image size   Vertical Align: Middle   ▾
☑ Maintain page aspect ratio

Determines how the original page is placed on the new image.

- *Fit to Page* will scale the original page to fit on the new image size chosen, scaling up to a larger image or down to a smaller one as needed. Pages will maintain their aspect ratio if the *Maintain page aspect ratio* check box is checked.

- *Actual Size* keeps the original information at the same size. Any part that does not fit on the new image size will be cut off. If *Shrink page if larger than image size* is checked, then you also have the choice of maintaining the aspect ratio.

Shrink page if larger than image size

Scales the image down to fit the new image size fax paper if the original image is larger.

Maintain page aspect ratio

Turn this option on to prevent distortion when scaling larger or smaller image to different image sizes. When this option is on, the height and width of the page change in relation to one another.

Horizontal Alignment:

Choose how to horizontally align the incoming image.

- *Left* will align the left side of the image to the left side of the new image.
- *Middle* will center the image in the horizontal middle of the new image.
- *Right* will align the right side of the image to the right side of the new image.

Vertical Alignment:

Choose how to vertically align the incoming image.

- *Top* will align the top of the image to the top of the new image.
- *Middle* will center the image in the vertical middle of the new image.
- *Bottom* will align the bottom of the image to the bottom of the new image.

See Also: Using the Copy To Image Feature

Resample

The Resample feature allows you to scale the output file to a particular width and height in pixels, as a percentage of the original size, or by setting a new image resolution (DPI).

These options override any settings you may have chosen in the Advanced Options Dialog.

Pixels
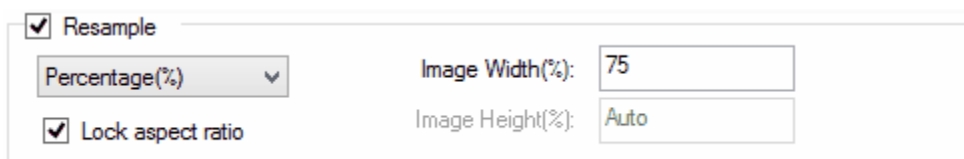
Enter in the new *Image Width* in pixels. If *Lock aspect ratio* is on, the *Image Height* will automatically be calculated to prevent distortion of the image.

Uncheck *Lock aspect ratio* to enable the *Image Height* field and specify an height for the image.

See Also: Resample Using Pixels

Percentage(%)
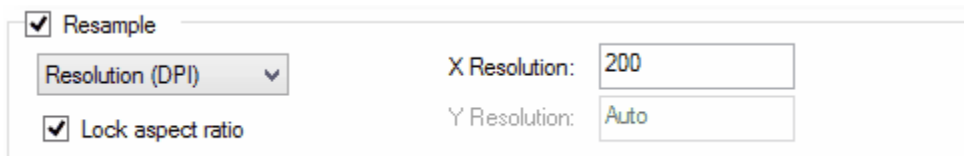
Enter in the new *Image Width(%)* as a percentage of the original page size. You can scale images up to 500% larger, but note that if the image is very large to begin with, it may not scale successfully due to memory limitations. If *Lock aspect ratio* is on, the *Image Height(%)* will automatically be calculated to prevent distortion of the image.

Uncheck *Lock aspect ratio* to enable the *Image Height(%)* field and specify an height for the image.

See Also: Resample Using Percentage

Resolution(DPI)

Enter in the new *X Resolution* for your image. You can scale as low as 50 DPI and up to as high as 3600 DPI. If *Lock aspect ratio* is on, the *Y Resolution* will automatically be calculated to prevent distortion of the image.

Uncheck *Lock aspect ratio* to enable the *Y Resolution* field and specify an height for the Y resolution of the image.

Lock aspect ratio

Constrains the image height and width so the image does not get distorted when resampling.

See Also: Resample Using Resolution

License

Launches the *Activation Wizard* as described in the Activating Raster Image Printer section if you are in trial mode.

If you have already activated Raster Image Printer , you will see a summary of your license information (see Viewing Your Activation Status for more details)

Restore Defaults

Restores this tab's settings back to the defaults when the driver was first installed.

Help

Brings up the on-line help for this tab.

Compression

The Compression options allow you to choose how to compress the images and PDF files created to reduce the amount of physical disk space needed to store the then.

There are two main ways to reduce the size of the image:

- use the *Color Options* on the Save tab to reduce the number of colors used in the image.

- use the *Compression* option to compress the image data itself so it takes up less space
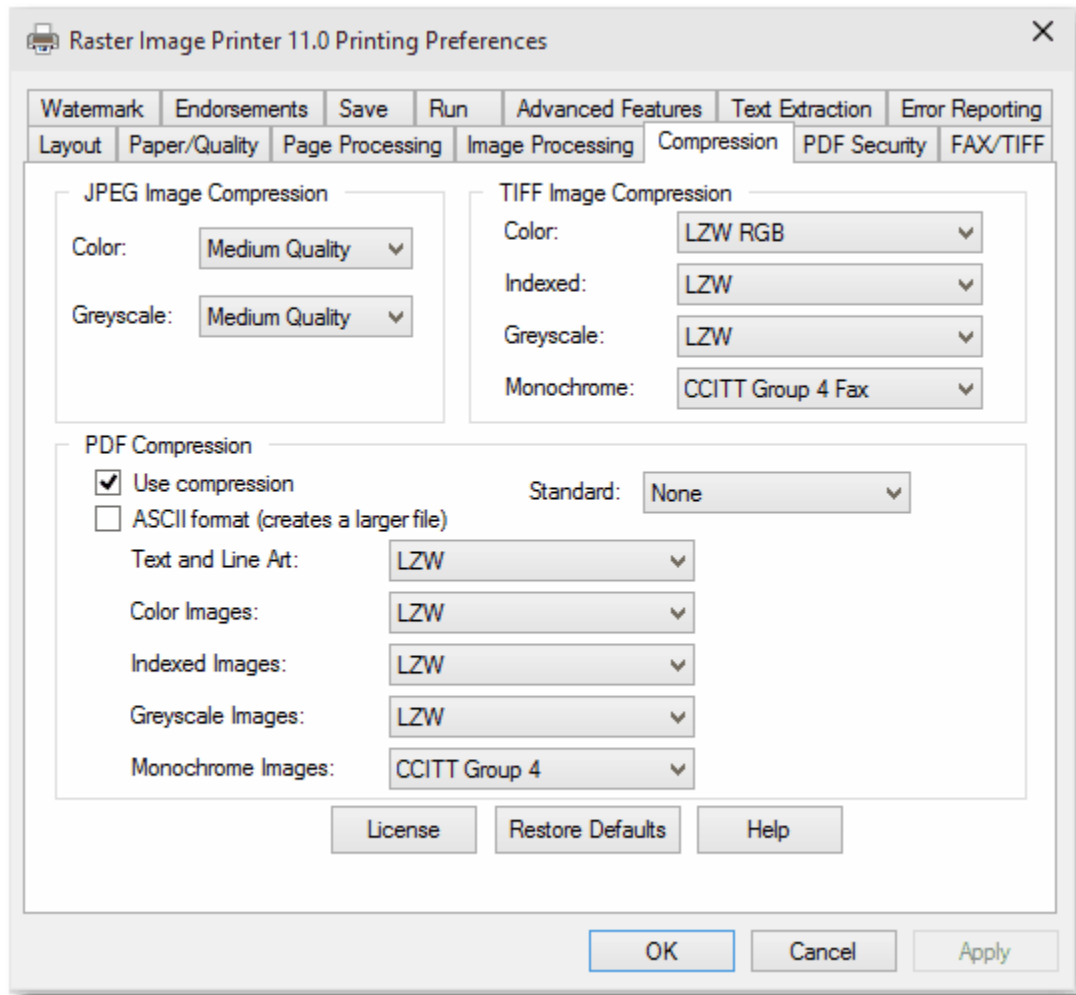
JPEG Image Compression

JPEG images created by Raster Image Printer can be created as 24-bit color and 8-bit greyscale.

The image quality level can be set for each color model; the higher the image quality the larger the file. This trade off between the compression level and image quality is due to the compression algorithm used by JPEG. The algorithm used is *lossy,* meaning that information is removed from the image in order to compress it.

JPEG compression works best on photographic images where the human eye will *fill in* the

missing information. It does not work well on line drawings or text-based files as its lossy compression causes blurred lines or text.

Color - select one of the following image quality settings to use when creating a color JPEG image.

- High Quality

- Medium Quality

- Low Quality

Greyscale - select one of the following image quality settings to use when creating a greyscale JPEG image.

- High Quality

- Medium Quality

- Low Quality

TIFF Image Compression

TIFF compression methods, with the exception of JPEG compression, do not affect the image quality. You may need to experiment with the compression methods to find the best balance between the size of the TIFF file and the quality of the images.

See Also: Reducing File Size with Compression Options

Color - select one of the following compression methods to use when compressing color TIFF images.

- Uncompressed, RGB or CMYK

- Low, Medium or High Quality JPG

- Packbits, RGB or CMYK

- LZW, RGB or CMYK

> ⚠️ **CMYK Compression and Viewing TIFF Images**
> Not all image viewers understand CMYK compression, and as a result, may not display the TIFF image correctly. For example, *Microsoft Document Imaging* is known to have this problem, while *Windows Photo Gallery* (on Vista) or *Windows Picture and Fax Viewer* (on XP) do display the TIFF correctly.

Indexed - select one of the following compression methods to use when compressing indexed images.

- Low, Medium or High Quality JPG

- Packbits

- LZW

- None

Greyscale - select one of the following compression methods to use when compressing greyscale images

- Low, Medium or High Quality JPG

- Packbits

- LZW

- None

Monochrome - select one of the following compression methods to use when compressing monochrome images

- CCITT Group 4 Fax

- CCITT Group 3 2D Fax

- CCITT Group 3 1D Fax

- CCITT Modified Huffman

- LZW

- Packbits

- None

PDF Compression

PDF files created by Raster Image Printer are *non-searchable*, or raster, PDF files very similar to PDF files created from a scanner. A non-searchable PDF file is a series of one or more TIFF images wrapped in a PDF document. PDF compression methods, with the exception of JPEG compression, will not affect the image quality of the file. You may need to experiment with the compression methods to find the best balance between the size of the PDF and the quality of the images on the pages.

See Also: [Reducing File Size with Compression Options]

Use Compression - optionally turn off all compression in the PDF file. Compression is enabled by default for all PDF files created. Turning the compression options off will increase the size of your document.

ASCII format - store the PDF file in ASCII format. The ASCII format compression option creates a 7-bit compressed PDF file. This option is rarely needed anymore and is only included for compatibility with older networks and e-mail systems; leave this option unchecked to create an 8-bit compressed document.

Standard - optionally create the PDF file with **PDF/A-1b** compliance. The default, *None,* will create a PDF file that makes no special effort to to comply with the PDF/A-1b specifications, while choosing *PDF/A-1b* will create a PDF/A-1b compliant PDF file. A PDF file created with PDF/A-1b compliance is meant for long-term archiving of electronic documents and ensures that the document is visually correct. When creating a PDF/A compliant PDF file, all security options are automatically ignored and any LZW compression is replaced with ZIP compression.

Text and Line Art - select one of the following compression methods

- None

- Run Length

- ZIP

- LZW

Compression

Color Images - select one of the following compression methods to use when compressing color images.

- None

- Low, Medium or High Quality JPG

- Run Length

- ZIP

- LZW

Indexed Images - select one of the following compression methods to use when compressing indexed images.

- None

- Low, Medium or High Quality JPG

- Run Length

- ZIP

- LZW

Greyscale Images - select one of the following compression methods to use when compressing greyscale images

- None

- Low, Medium or High Quality JPG

- Run Length

- ZIP

- LZW

Monochrome Images - select one of the following compression methods to use when compressing monochrome images

- None

- CCITT Group 3 1D

- CCITT Group 3 2D Fax

- CCITT Group 4 Fax

License

Launches the *Activation Wizard* as described in the Activating Raster Image Printer section if you are in trial mode.

If you have already activated Raster Image Printer , you will see a summary of your license information (see Viewing Your Activation Status for more details)

Restore Defaults

Restores this tab's settings back to the defaults when the driver was first installed.

Help

Brings up the on-line help for this tab.

Compression

PDF Security

Adobe® PDF files can be created with or without security. Creating a secure PDF file allows you to restrict what can be done with the contents of the file. For instance, you can allow people to read and print the file but not be able to copy any of the text or images out of the file.

Supported security options consist of two different levels of encryption, the ability to control what the viewer can do with PDF file, and two levels of password protection.

Secure PDF files will take longer to create than non-secured files.
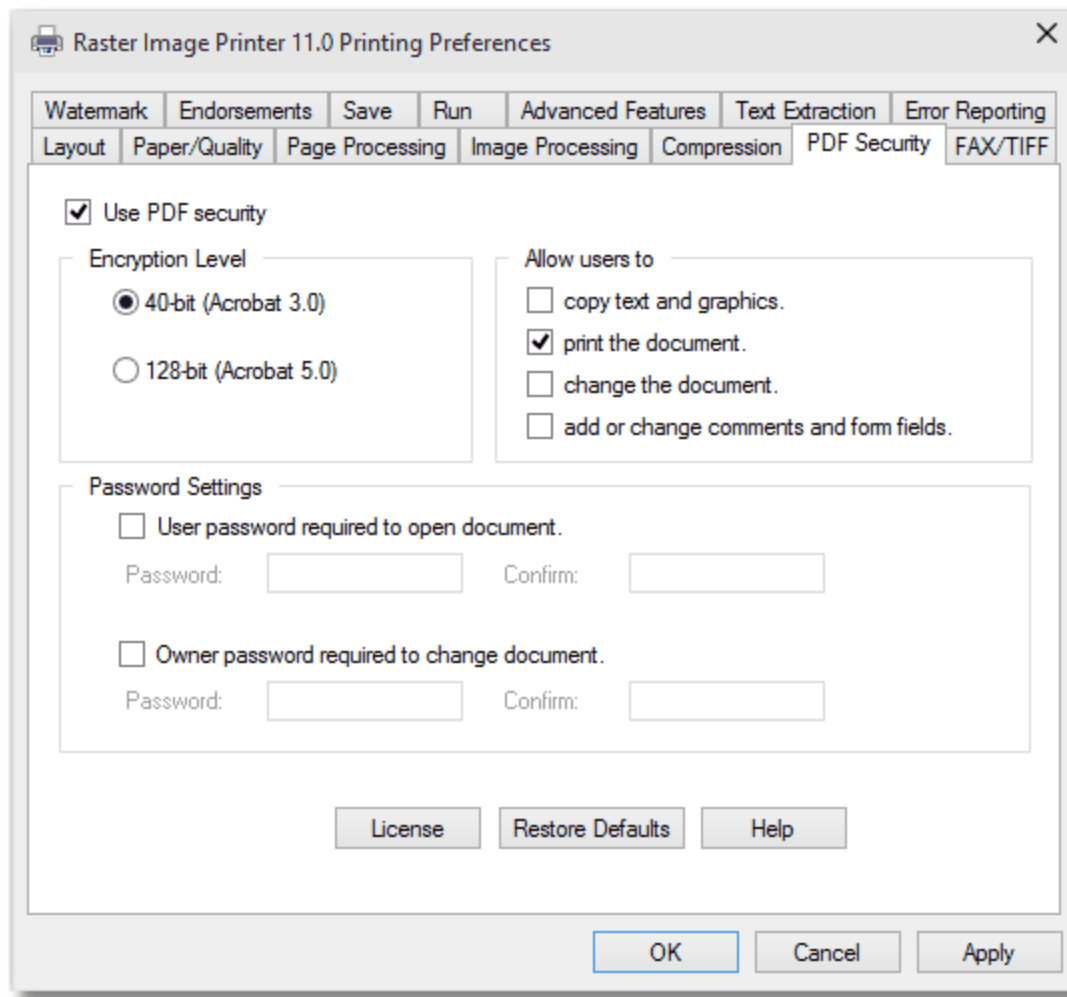
Use PDF Security

Enable this check box to create secure PDF files.

See Also: Setting PDF Security Options

Encryption Level

There are two encryption options available. The encryption option chosen determines what version of Acrobat is needed to open and view the file.

40-bit Encryption:

The PDF file can be opened in Acrobat 3.0 and later versions.

128-bit Encryption:

The PDF file can be opened in Acrobat 5.0 and later versions.

Allow Users to

Depending on what you want viewers to be able to do with the PDF file you create, different permissions can be set to restrict what can and cannot be done.

Copy text and graphics:

Enable this check box to allow text and images in the file to be selectable and allow copying to the clipboard for use in other documents.

Print the document:

Enable this check box to allow the file to be printed. When this is not checked the document can only be viewed on screen.

Change the document:

Enable this check box to allow pages in the file to be inserted, removed and modified. This also allows document signing as well as adding or editing form fields.

Add or change comments and form fields:

Allows only form fields and comments to added, edited or removed; pages cannot be added or removed.

Password Settings

There are two levels of password protection that can be set – one for opening the PDF file (also known as the document open password), and one for making changes or modifying the file (also called the permissions password).

User password required to open document:

Enable this check box to require anyone opening this file to type in the password you specify.

Password - type in the password you want to use to open the file.

Confirm - type the same password in again to confirm.

Owner password required to change document:

Enable this check box to require anyone making changes to this file to type in the password you specify. When set, this password is required to change the security settings or to modify permissions on the document, such as whether content copying or form field editing is allowed.

Password - type in the password you want to use to change the file.

Confirm - type the same password in again to confirm.

If both the user password and the owner password are set, entering either password for the open document password prompt will open the PDF file.

License

Launches the *Activation Wizard* as described in the Activating Raster Image Printer section if you are in trial mode.

If you have already activated Raster Image Printer , you will see a summary of your license information (see Viewing Your Activation Status for more details)

Restore Defaults

Restores this tab's settings back to the defaults when the driver was first installed.

Help

Brings up the on-line help for this tab.

FAX/TIFF Options

The FAX/TIFF tab is used to create fax-format images and files.

Raster Image Printer gives you the following features when creating fax format files:

- create either Profile F (standard monochrome), Profile S (simplified monochrome) , or Profile C (color fax) format faxes.If your output file is not a TIFF, PDF or JPEG the file may not be faxable but it will have the requested fax resolution and paper size.

- create your fax in various paper sizes

- complete control over how the fax image is scaled and its alignment on the page
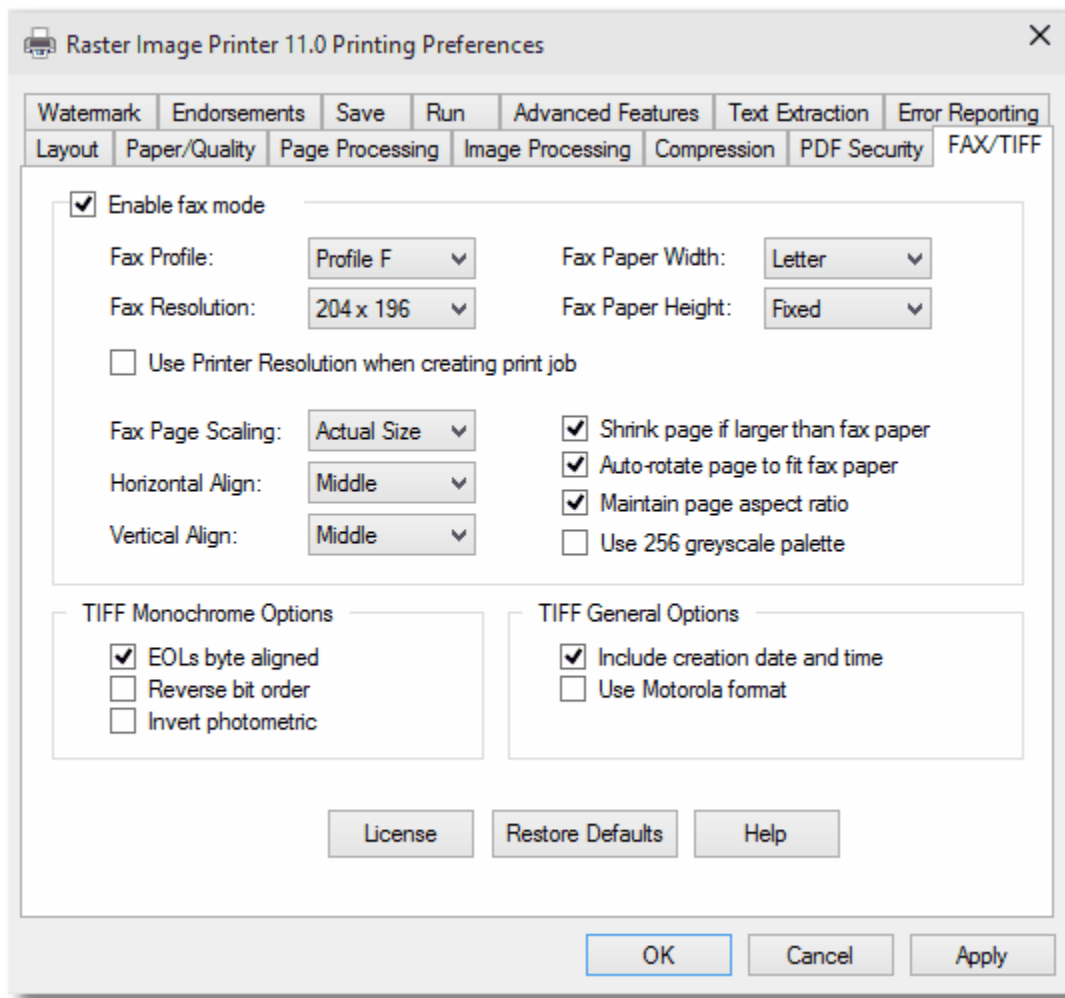
See Creating Fax Format Files for step-by step instructions to create fax format files.

When Profile F or Profile S fax mode is chosen, a reduced fax mode palette is used. With this palette light or pale colors such as yellow will get reduced to white and will appear to be "missing" in the document.

Fax Mode Options

Enable fax mode

Enable this check box to create faxable files.

Fax Profile:

Select a fax format profile for your output file. Different fax profiles allow different fax resolutions, with Profile F having the most.

- Profile F (standard), monochrome fax
- Profile S (simplified), monochrome fax,
- Profile C (color fax)

Fax Resolutions	Profile S	Profile F	Profile C
100x100		•	•
200x100	•	•	
200x200	•	•	•
204x98	•	•	
204x196	•	•	
204x391		•	
300x300		•	•
300x600		•	
400x400		•	•
400x800		•	
408x391		•	
600x600		•	•
600x1200		•	
1200x1200		•	•

Fax Resolution:

The *Fax Profile* chosen determines what resolutions are listed. Not all profiles support all resolutions. The resolution selected here overrides any other resolution selection that you may have set on through the Advanced Options.

Fax Paper Width:

Sets the width of the fax paper to be used when creating the faxable image. If you choose one of the paper sizes, *Letter*, *Legal*, *A4 (ISO)*, *A3 (ISO)*, or *B4 (ISO)*, the width of your original document will be scaled to fit this selection, based on the scaling options chosen on this dialog.

If you choose *Auto*, the original paper size of your source document will be used to find the closed match of the five paper sizes and that size will be used.

Available widths (in pixels) are:

Resolution	Letter/Legal/A4(ISO)	A3 (ISO)	B4 (ISO)
100x100	864	1216	1024
200x100	1728	2432	2048
200x200	1728	2432	2048
204x98	1728	2432	2048
204x196	1728	2432	2048
204x391	1728	2432	2048
300x300	2592	3684	3072
300x600	2592	3684	3072
400x400	3456	4864	4096
400x800	3456	4864	4096
408x391	3456	4864	4096
600x600	5184	7296	6144
600x1200	5184	7296	6144
1200x1200	10368	14592	12288

Fax Paper Height:

Sets the height of the fax image.

- *Fixed* fax paper height will limit the image length based on the *Fax Paper Width* chosen above. Any scaling required is done based on the scaling options chosen in this dialog.

- *Variable* fax paper height will vary the image length depending on the size of the document sent to the printer and its resulting size after being scaled to fit the chosen *Fax Paper Width*.

Available heights (in pixels) when using *Fixed* fax paper are:

Resolution	Letter/	Legal	A4 (ISO)	A3 (ISO)	B4 (ISO)
100x100	1100	1400	1169	1654	1390
200x100	1100	1400	1169	1654	1390
200x200	2200	2800	2338	3308	2780
204x98	1078	1372	1145	1620	1362
204x196	2156	2744	2291	3421	2724
204x391	4301	5474	4750	6467	5434
300x300	3300	4200	3507	4962	4170

FAX/TIFF Options

Resolution	Letter/	Legal	A4 (ISO)	A3 (ISO)	B4 (ISO)
300x600	6600	8400	7014	9924	8340
400x400	4400	5600	4676	6616	5560
400x800	8800	11200	9352	13232	11120
408x391	4301	5474	4570	6467	5434
600x600	6600	8400	7014	9924	8430
600x1200	13200	16800	14028	19848	16680
1200x1200	13200	16800	14028	19848	16680

Use Printer Resolution when creating print job:

Renders each page using the printer resolution and not the chosen fax resolution. This prevents the creation of extra pages from some applications, such as Excel, when forced to render a document at Fax resolution.

Fax Page Scaling:

Determines how the original information is placed on the fax sized image.

- *Fit to Page* will scale the original page to fit on the fax paper size chosen, scaling up to a larger page size or down to a smaller page size as needed. Pages will maintain their aspect ratio if the *Maintain page aspect ratio* check box is checked.

- *Actual Size* keeps the original information at the same size. Any part that does not fit on the fax paper is cut off. If *Shrink page if larger than fax paper* is checked, then you also have the choice of maintaining the aspect ratio.

Horizontal Alignment:

Choose how to horizontally align the incoming image on the fax-sized paper.

- *Left* will align the left side of the image to the left side of the fax paper.

- *Middle* will center the image in the horizontal middle of the fax paper.

- *Right* will align the right side of the image to the right side of the fax paper.

Vertical Alignment:

Choose how to vertically align the incoming image on the fax-sized paper.

- *Top* will align the top of the image to the top of the fax paper.

- *Middle* will center the image in the vertical middle of the fax paper.

- *Bottom* will align the bottom of the image to the bottom of the fax paper.

Auto-rotate page to fit fax paper

The original image is rotated to fit on the fax-sized paper if the rotated image will fit without having to scale the image.

Shrink page if larger than fax paper

Scales the image down to fit the fax paper if the original image is larger.

Maintain page aspect ratio

Turn this option on to prevent distortion when scaling larger or smaller pages. When this option is on, the height and width of the page change in relation to one another.

Use 256 grayscale palette

Turn this option on to allow Fax Mode to use a full 256 grayscale palette when dithering to black and white. The default is to use a 64 grayscale palette to reduce the size of the fax and eliminate low intensity colors used normally to shape areas.

TIFF Monochrome Options

EOLs byte aligned

Enable this check box to align rows of CCITT Group 3 1D and 2D image data on word boundaries. This option only applies if the *Monochrome* compression option on the [Compression](#) tab is set to use either CCITT Group 3 2D Fax or CCITT Group 3 1D Fax.

Reverse Bit Order

Reverse-bit order, also known as fill order, is used to specify the bit order in which the image data in a CCITT compressed TIFF file should be stored.

Enable this check box to store the image data in *Least Significant Bit* (LSB) to *Most Significant Bit* (MSB) order. If this check box is not checked, the data is stored in *MSB* to *LSB* order.

This option does not apply if you enable fax mode and select *Profile S* as your fax profile. *Profile S* fax images are always created as *LSB* to *MSB*.

Invert Photometric

The photometric interpretation option determines the order of the black and white palette entries for a monochrome TIFF file. A monochrome TIFF file has a palette of exactly two colors - white and black.

- MINISWHITE - the palette entry for 0 is white. This is will give you black text on a white background.

- MINISBLACK - the palette entry for 0 is black. This will give you a reverse, or inverted, effect of white text on a black background.

Enable this check box to select MINISBLACK order.

TIFF General Options

Include creation date and time

Enable this check box to have the creation time and date added to your outputted TIFF file.

Use Motorola format

Enable this check box to create TIFF images using *Motorola* (big-endian) byte order. The default format is *Intel* (little-endian) byte order.

This option does not apply if you enable fax mode and select *Profile S* as your fax profile.

License

Launches the *Activation Wizard* as described in the Activating Raster Image Printer section if you are in trial mode.

If you have already activated Raster Image Printer , you will see a summary of your license information (see Viewing Your Activation Status for more details)

Restore Defaults

Restores this tab's settings back to the defaults when the driver was first installed.

Help

Brings up the on-line help for this tab.

Watermark

The Watermark tab allows you to place an image based watermark behind the text and images on your original pages. Watermark images can be color, greyscale or black and white, but the image will be converted to greyscale before being placed on the page.

The following image types can be used as a watermark image:

➤ TIFF (*.tif) images

➤ JPEG (*.jpg) images

➤ CompuServe PNG images

➤ Windows Bitmap (*.bmp)
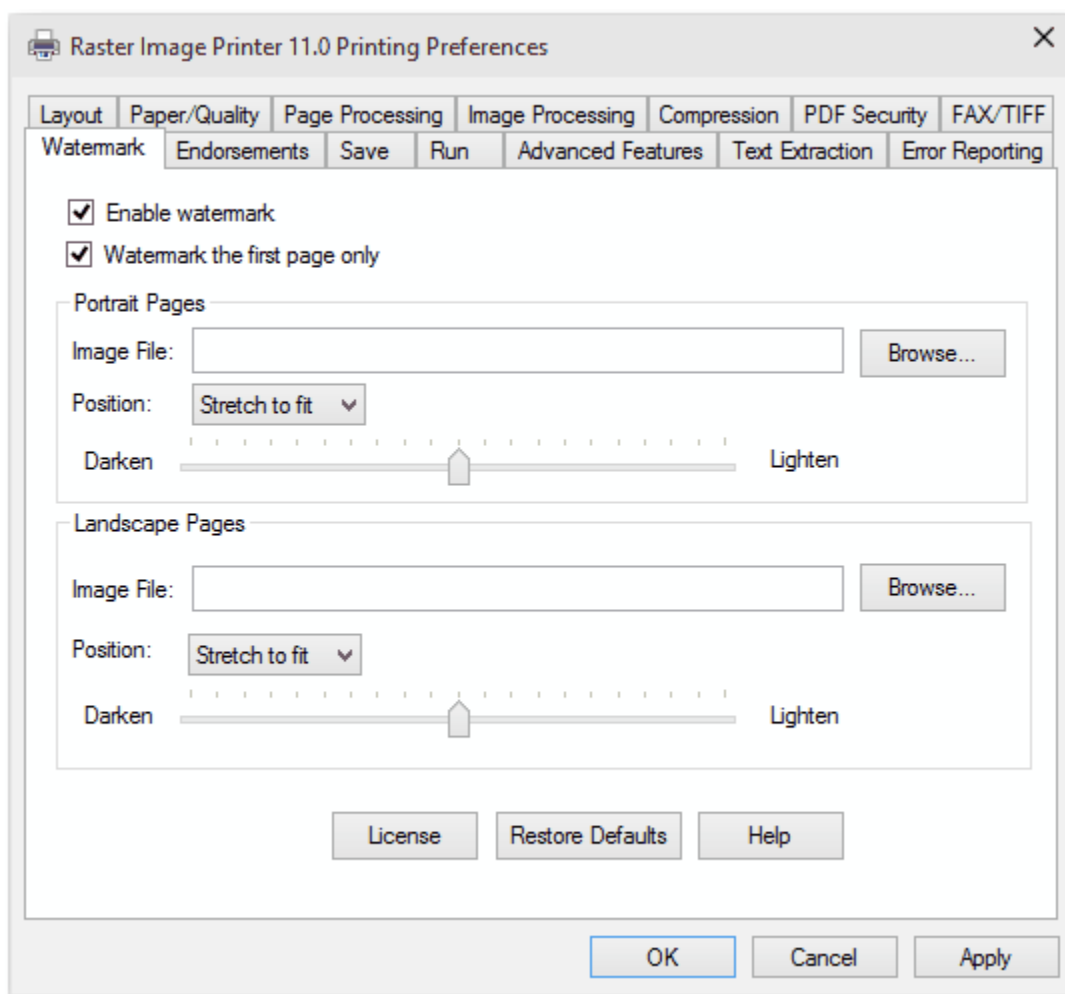
Enable Watermark

Enable this check box to use the watermark feature.

First Page Only

Enable this check box if you want the watermark to be applied to the first page only.

Portrait Pages

Image File:

Enter the full path to the image file to be used as the watermark on portrait pages, or use the *Browse...* button to search and locate a file.

*Valid file types are *.bmp, *.jpg, *.png, and *.tif.*

Position:

Use this option to determine how the watermark image is placed on the page.

- *Stretch to fit* - stretches the image to fit the page.

- *Tile* - leaves the image at its original size and repeats the image to fill the page.

- *Center* - will center the image in the middle of the page both horizontally and vertically.

Brightness Slider:

Allows you to lighten or darken the watermark image. Move the thumb control on the slider to the left to darken the image or right to lighten the image. If your watermark image has already been lightened leave the slider in the middle (0) to leave the watermark image alone.

Landscape Pages

Image File:

Enter the full path to the image file to be used as the watermark on landscape pages, or use the *Browse...* button to search and locate a file.

*Valid file types are *.bmp, *.jpg, *.png, and *.tif.*

Position:

Use this option to determine how the watermark image is placed on the page.

- *Stretch to fit* - stretches the image to fit the page.

- *Tile* - leaves the image at its original size and repeats the image to fill the page.

- *Center* - will center the image in the middle of the page both horizontally and vertically.

Brightness Slider:

Allows you to lighten or darken the watermark image. Move the thumb control on the slider to the left to darken the image or right to lighten the image. If your watermark image has already been lightened leave the slider in the middle (0) to leave the watermark image alone.

License

Launches the *Activation Wizard* as described in the Activating Raster Image Printer section if you are in trial mode.

If you have already activated Raster Image Printer , you will see a summary of your license information (see Viewing Your Activation Status for more details)

Restore Defaults

Restores this tab's settings back to the defaults when the driver was first installed.

Help

Brings up the on-line help for this tab.

Watermark

Endorsements

Endorsements are the placing of additional header and footer information at the top and bottom of each page. Header and footers can contain text such as titles and page numbers. The default height of both the header and the footer is 12 points; this can be adjusted individually as needed.
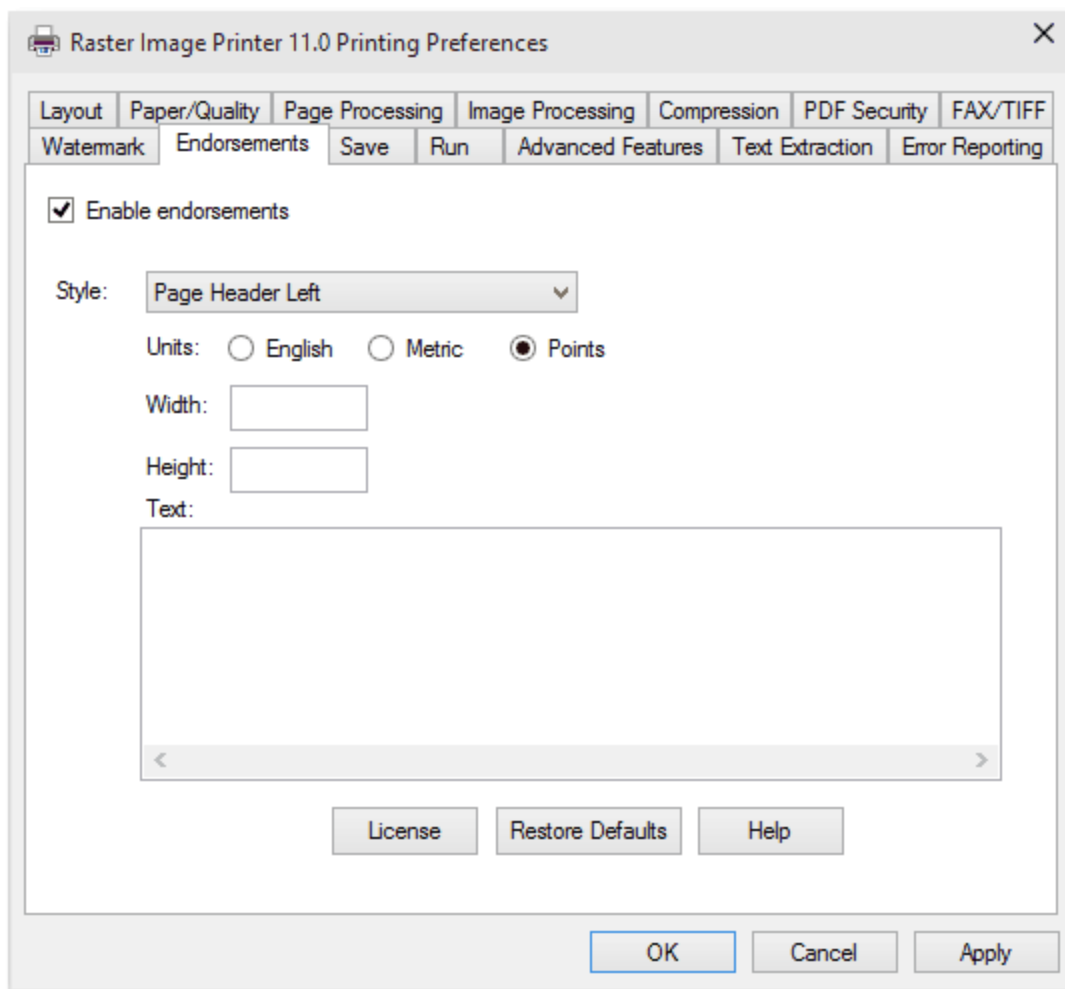
Enable Endorsements

Enable this check box to use the endorsements feature.

Style

Use this drop down list to select the area for which you want to edit the endorsement text. Both the page header and the page footer are made up of three separate sections - a left section, a center section and a right section for a total of six areas in which to place text.

Text in the top left and bottom left section is always left justified, text in the top center and bottom center section is always centered and text in top right and bottom right sections is always right justified.

Page Header Left	Page Header Center	Page Header Right
Page Footer Left	Page Footer Center	Page Footer Right

Units:

Determines the unit of measure used to enter any section width or height or font size information for the endorsement. Choose *Points* to enter the measurements in points, *English* to enter the measurements in inches or *Metric* to enter the units in centimeters.

Width:

The width of each section can be set individually to allow for text wrapping within each section. The default width for each section is the width of the page.

Height:

The height of each section can be set individually. The default height for each section is 12 points.

Text:

Use this text field to enter the data to display in each part of the header or footer. The text can be formatted using the formatting codes (see complete table below) to add page number information to your header or footer text, as well as to display the text in different fonts, font sizes, colors and other text attributes such as bold, italic and underline. The default font used is Arial, 12 points, Black.

Some common examples of header and footer strings are shown below.

- Place the text "Page " and the current page number in the upper right corner of each page using the format string **Page &P** in the *Page Header Right* endorsement area. This endorsement will be in the default font of Arial 12 point, colored black.

- Place the custom text "Internal Use Only - Confidential" at the bottom center of each page. Format the text so that it is in Verdana 14 point, colored red, and with only the words "Internal Use Only" in bold text. For this, use the format string **&KFF0000&'Verdana'&14&BInternal Use Only&B&'Arial' - Confidential** in the *Page Footer Center* endorsement area.

See Also: Placing Endorsements on Your Pages

Header and Footer Formatting Codes:

The following formatting codes are used to format the text strings placed in the headers and footers.

String Code	Description
&P	This code is replaced by the current page number.
&B	Turns bold formatting on and off. All text after the first occurrence of the formatting code will be bold until the same formatting code is encountered again.
&I	Turns italic formatting on and off. All text after the first occurrence of the formatting code will be italicized until the same formatting code is encountered again.

String Code	Description
&U	Turns font underlining on and off. All text after the first occurrence of the formatting code will be underlined until the same formatting code is encountered again.
&S	Turns font strike though formatting on and off. All text after the first occurrence of the formatting code will be struck though (a line down the middle of the text) until the same formatting code is encountered again.
&'fontname'	Sets the font to be used for the following text. All text after the occurrence of the formatting code will be printed in the specified font until another font formatting code is encountered again. The default font is Arial.
&n	Sets the font size, in points, to be used for the following text, where n is replaced with the desired point size. All text after the occurrence of the formatting code will be printed in the specified font size until another font size formatting code is encountered again. The default font size is 12 points.
&K000000	Changes the color of the text. All text after the occurrence of the formatting code will be printed in the color specified until another color formatting code is encountered again. The default color is Black. The color is specified as six character RGB code, such as &KFF0000 for red or &K00FF00 for green.
&&	Allows the insertion of an ampersand character into the text.

License

Launches the *Activation Wizard* as described in the Activating Raster Image Printer section if you are in trial mode.

If you have already activated Raster Image Printer , you will see a summary of your license information (see Viewing Your Activation Status for more details)

Restore Defaults

Restores this tab's settings back to the defaults when the driver was first installed.

Help

Brings up the on-line help for this tab.

Save

The Save tab directly controls the naming and storing of the output files. From this tab you can do the following:

- ➢   choose what type of file to create

- ➢   turn append mode on or off

- ➢   pre-set the file name for your output file

- ➢   turn off the *Save Image As* dialog prompt

- ➢   configure the driver to always save in the same location

- ➢   use the *Advanced File Naming* to customize automatic file naming

- ➢   split the output file based on the number of pages or a file size threshold
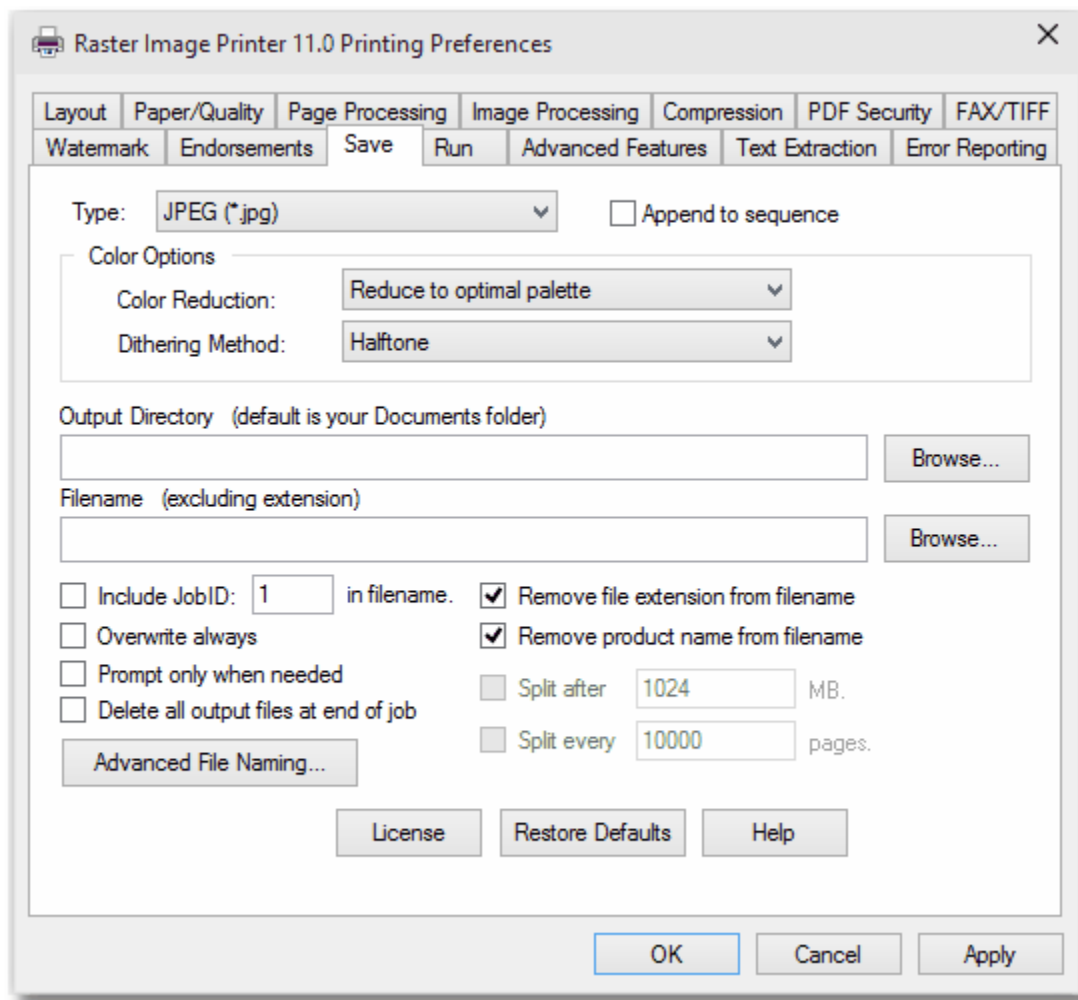
Type

These options control how each page of your document is saved. These options also appear on the **Save Image As** dialog when filename prompting is enabled.

Select the type of output file you want to create. All formats listed create serialized images except for TIFF images and Adobe PDF files, both of which can also create multipaged files.
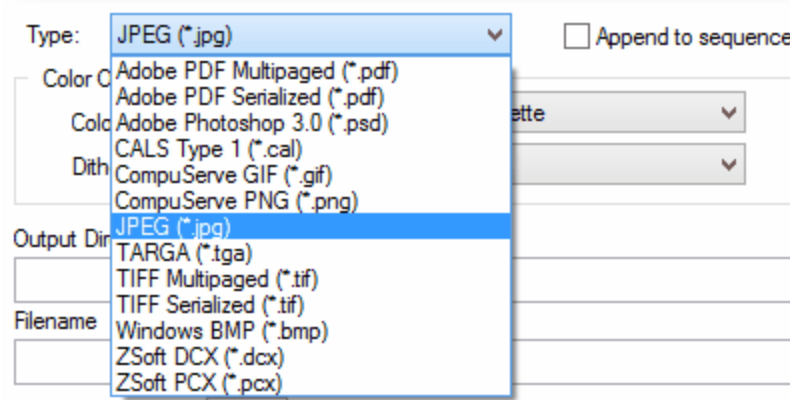
Serialized Files:

Select this option if you want each page of your document to be saved as an individual file. Each file is named uniquely based on its page number.

For example,creating **JPEG (*.jpg)** using the default settings when printing a three page Word document named *3pages.doc* will yield the following three files:

- 3pages_001.jpg

- 3pages_002.jpg

- 3pages_003.jpg

Multi-page:

Select this option if you want your entire document as a single, multi-page file.

For example, creating **TIFF Multipaged (*.tif)** using the default settings when printing a three page Word document named *3pages.doc* will yield the single TIFF file:

- 3pages.jpg - this file contains three images, one for each page.

Append to file\Append to sequence

Append mode will add the new pages to a sequence of files on disk, or if TIFF Multipaged (*.tif) is selected, the new pages will be added to an existing TIFF image. The *Append to file* option does not apply to multipaged PDF files; you can only append to a serialized sequence of PDF files. If append mode is enabled and the requested sequence or file does not yet exist on disk it is created.

Serialized with Append to sequence
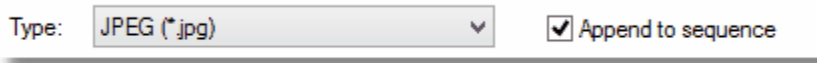
If *Append to sequence* is enabled, this option will continue an existing sequence of serialized files on disk, or begin a new sequence of serialized files if one does not already exist.

If the following files already existed:

- 3pages_001.jpg
- 3pages_002.jpg
- 3pages_003.jpg

then printing the same Word document, *3pages.doc*, once more, this time with *Append to sequence* enabled, will yield three new files following the same numbering sequence:

- 3pages_004.jpg
- 3pages_005.jpg
- 3pages_006.jpg

See Also: Creating a Serialized Sequence of Files

Multi-page with Append to file:
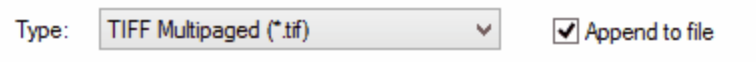
The *Append to file* option is only allowed when the output file type is **TIFF Multipaged (*.tif)**. The *Append to sequence* is disabled when **Adobe PDF Multipaged (*.pdf)** is chosen as PDF files can only be appended in serialized mode.

This option will append the new pages to an existing multi-page TIFF image file on disk, or create a new file if one does not already exist.

If the following files already existed:

- 3pages.tif

then printing the same Word document, 3pages.doc, once more, this time with *Append to file* enabled, will add three new pages to the file *3pages.tif,* for a total of six pages in the file.

See Also: Appending Multiple Files Into a Single TIFF Image

Color Options

Color Reduction:

Several color reduction options are available for reducing the number of colors in the output files. In general, the fewer the colors in an image, the smaller the file size. If the output file type chosen does not support that color mode, the closest match is found.

The color reduction settings are only applied if you have chosen to print in Color from the [Paper/Quality](#) tab. It will have no effect if Black and White has been chosen from the Paper/Quality tab.
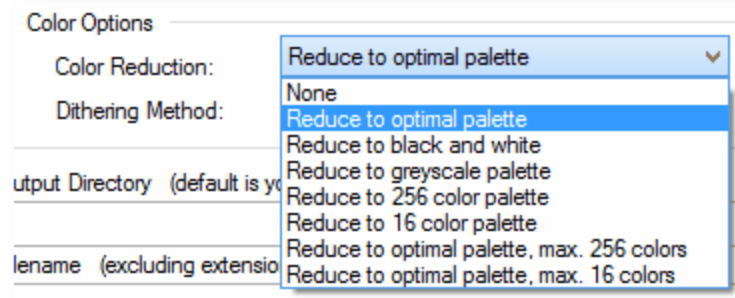
None - produces only true color images with no color reduction.

Reduce to optimal palette - directs Raster Image Printer to automatically reduce each page of your document to an image with the fewest number of colors possible without affecting image quality. The number of colors is counted for each page and the appropriate type of output file, black and white (2-color image), 256 colors, greyscale, or true color, is created for that page.

Reduce to black and white - reduces a color image to a black and white, or Monochrome image, using one of the *dithering methods* described below.

Reduce to greyscale palette - reduces a color image to a greyscale image composed exclusively of shades of neutral gray, varying from black at the weakest intensity to white at the strongest.

Reduce to 256 color palette - reduces or promotes all images to 256 color palette.

Reduce to 16 color palette - reduces or promotes all images to 16 color palette.

Reduce to optimal palette, max. 256 colors - this option is the same as *Reduce to optimal palette* except that any pages that have more then 256 colors will be reduced to a 256 color palette.

Reduce to optimal palette, max. 16 colors - this option is the same as *Reduce to optimal palette* except that any pages that have more then 16 colors will be reduced to a 16 color palette.

Dithering Method:

Dithering greatly enhances the appearance of color images that have been reduced to black and white. Because the same dithering method may produce different results in different situations, it is best to experiment when trying to determine the best dithering method for a given source image.

Save
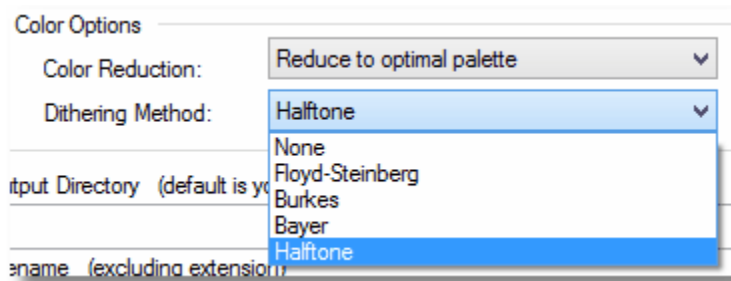
Dithering methods available are:

- None

- Floyd-Steinburg

- Burkes

- Bayer

- Halftone

See Also: Reducing File Size with Color Reduction

Output Directory

This is the default directory for saving your output files. If this field is empty, the *Documents* folder is used as the default directory.

Enter in the absolute path (for example, C:\My Files) of the directory to be used, or you can use the *Browse...* button to search and locate the desired folder.

See Also: Changing Where the Files are Saved

Filename

This is the base filename for your output file. The base filename excludes any directory path and file extension.

If you want your images to always use the same filename, enter that name here. You can also use the *Browse...* button to search and locate the desired filename from an existing file on your computer.

If this field is empty Raster Image Printer will name the file using the name the printing application uses when printing the file.

Raster Image Printer automatically inserts the appropriate file format extension. If you enter your own extension (for example, myfile.xyz), then another extension is added to the filename (for example, myfile.xyz.jpg).

The custom file naming option, $(OutputFileName), on the *Advanced File Naming* page will can override this field.

See Advanced File Naming for more information on customizing file names.

Include JobID in Filename

The JobID is set to zero when the driver is first installed and is automatically incremented by Raster Image Printer at the start of every print job. You can set the JobID to any value between 0

and 4294967295 at any time.

The JobID is often used to ensure that all files created have unique names. It is also used to determine which *naming profile* to use.

See Advanced File Naming for more information on naming profiles and customizing file names.

Overwrite always

Turns off prompting when the driver is about to overwrite an existing file. When not enabled, a confirmation dialog prompt is shown when Raster Image Printer tries to save a file with the same name as an already existing file

Enable this check box if you do not want to be prompted when the driver overwrites existing files.

Prompt only when needed

Turns off the *Save As Image* dialog prompt and uses the options in the *Output Directory* and *Filename* fields (see above) to name and store the file.

If the filename entered in the *Filename* field is not valid and the source document itself does not have a valid filename, you will be prompted.

Enable this check box if you do not want to be prompted for a filename with the *Save As Image* dialog box.

See Also: Saving Files Without Prompting

Delete all output files at end of job

Enable this check box if you want all output files deleted at the end of the print job (after the final run command). This option is useful if you are using the Run commands to do additional processing on the output file and do not want to leave any local copies on disk.

Remove file extension from filename

Some applications include a file extension with the document name. Enable this check box if you want Raster Image Printer to automatically remove the file extension from the filename.

Remove product name from filename

Some applications precede the document name with the name of their product. Enable this check box if you want Raster Image Printer to automatically remove the product name from the filename.

Split after size

Enables file splitting based on a size threshold. The file will be split when the size exceeds the threshold. When file splitting is enabled, the serialized naming profile is always used to name each file in the sequence. File size and page count splitting can be used together.

The file size entered must be a minimum of 1MB and less than 2GB (2048MB).

File splitting only applies to the following multipaged file formats:

- TIFF Multipaged - TIFF Multipaged (*.tif)

- Adobe PDF Multipaged - Adobe PDF Multipaged (*.pdf)

- ZSoft DCX - ZSoft DCX (*.dcx)

See Also: [Automatically Splitting Files](#)

Split every N pages

Enables file splitting based on the page count. When file splitting is enabled, the serialized naming profile is always used to name each file in the sequence. You can split by both page count and file size at the same time.

The page count must be a minimum of 1 page. If the page count provided is greater than the number of pages in the document, no file splitting will take place.
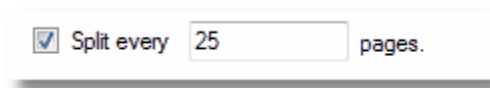
File splitting only applies to the following multipaged file formats:

- TIFF Multipaged - TIFF Multipaged (*.tif)

- Adobe PDF Multipaged - Adobe PDF Multipaged (*.pdf)

- ZSoft DCX - ZSoft DCX (*.dcx)

See Also: [Automatically Splitting Files](#)

Shows the [Advanced File Naming](#) dialog, where you can customize how the images are named.

License

Launches the *Activation Wizard* as described in the Activating Raster Image Printer section if you are in trial mode.

If you have already activated Raster Image Printer , you will see a summary of your license information (see [Viewing Your Activation Status](#) for more details)

Restore Defaults

Restores this tab's settings back to the defaults when the driver was first installed.

Help

Brings up the on-line help for this tab.

Advanced File Naming

This dialog box allows you to further configure and customize how your output files are named. If you need to set up file naming to create each file with a unique name, or you need to include certain information in every filename, such as the date or who printed the file, this is where you would make those changes.
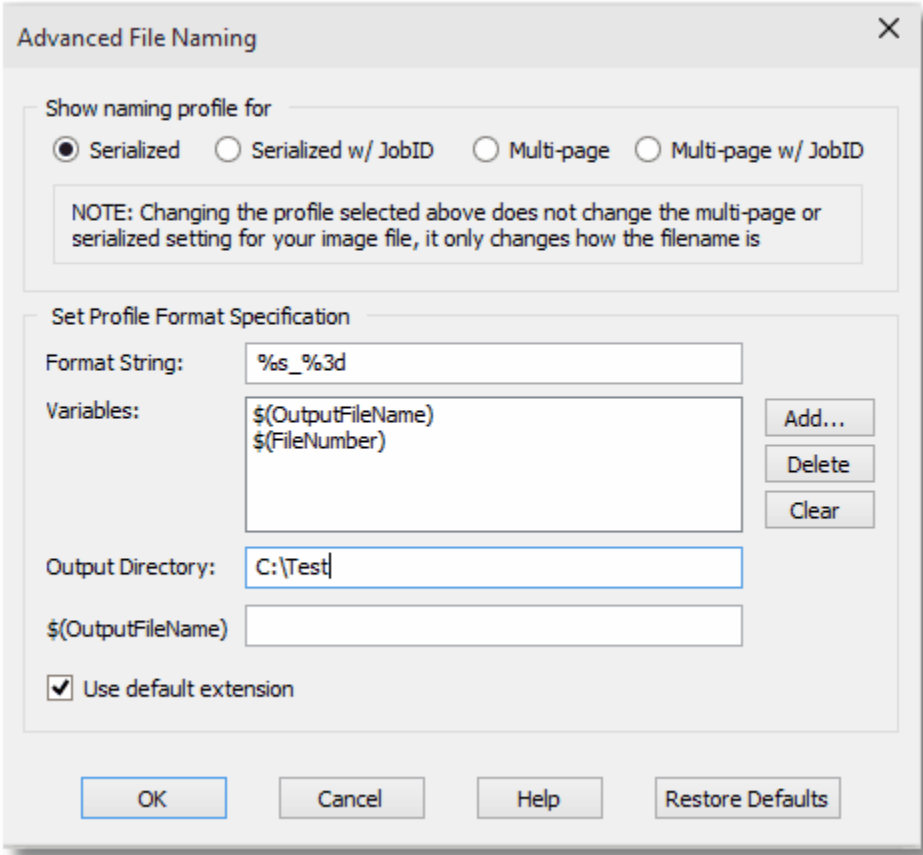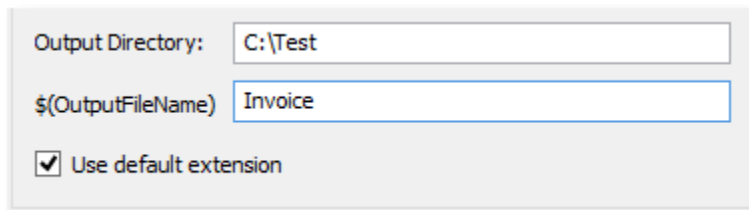
Naming Profiles

There are four different naming profiles to customize. Which naming profile is used depends on your current settings for the *Serialized* or *Multi-page* and *Include JobID* options on the Save tab. It is the combination of these settings that determines which profile is used to build the filename

Serialized or Multi-page	Include JobID	Naming Profile
Serialized	No	Serialized
Serialized	Yes	Serialized w/ JobID
Multi-paged	No	Multi-page
Multi-paged	Yes	Multi-page w/ JobID

Select one of the four available profiles to display its default settings. These settings are used to view and/or modify the default settings for a given profile, affecting how all documents using that profile are saved. Changing the selected profile here does not affect your settings on the Save tab.

To see how the naming profiles differ, consider the following settings and how the filename changes. The *Format String* and *Variables* list are explained in more detail below.

Output Directory:	C:\Test
$(OutputFileName)	Invoice
☑ Use default extension	

Profile	Format String	Variables and Resulting File Names

Serialized
Can be used with all output formats.
	%s_%3d	$(OutputFileName)
		$(FileNumber)
		
		`C:\Test\Invoice_001.jpg`
		`C:\Test\Invoice_002.jpg`
		`C:\Test\Invoice_003.jpg`
		`...`

Serialized w/ JobID
Can be used with all output formats.
	%3d_%s_%3d	$(JobID)
		$(OutputFileName)
		$(FileNumber)
		
		`C:\Test\010_Invoice_001.jpg`
		`C:\Test\010_Invoice_002.jpg`
		`C:\Test\010_Invoice_003.jpg`
		`...`

Multi-page
Can only be used when creating TIFF images and PDF files.
	%s	$(OutputFileName)
		`C:\Test\Invoice.pdf - or -`
		`C:\Test\Invoice.tif`

Multi-page w/ JobID
Can only be used when creating TIFF images and PDF files.
	%3d_%s	$(JobID)
		$(OutputFileName)
		`C:\Test\011_Invoice.pdf - or -`
		`C:\Test\011_Invoice.tif`

Profile Format Specification
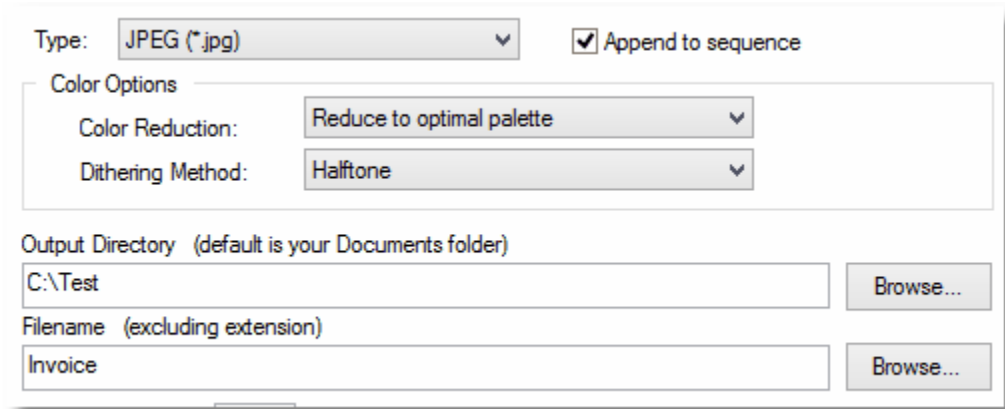
Format String

The format string field is used in conjunction with the variables (see below) to build the filename. A format string is built up using regular text and place holders for string and numeric variables supplied by the driver.
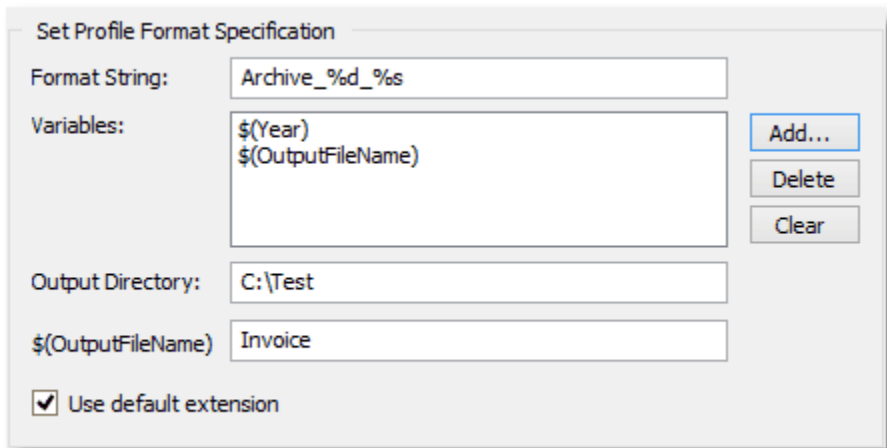
A *%s* is used as a place holder for string variables, and a *%d* is used for numeric variables. To pad numeric values with zeroes, place a number between the % and the "d" (see the format string above for Serialized). The order of the place holders must match the order of the variables; numeric variables must have a numeric place holder and string variables must have a string place holder.

Save

All other characters appearing in the format string will be reproduced literally (as is) when building the filename.

For example, with the <u>Save</u> tab set to the following:

and using these settings for the filename:

will create filename of `C:\Test\Archive_2010_Invoice.jpg`.

Variables

Use the *Add* and *Delete* buttons to create a list of variables that match the place holders in the format string above. Use the *Clear* button to clear all the entries in the variable list.

Variable	Type and Format String Place Holder	Description
$(Day)	Numeric, %d	The day in numeric format that the print job was submitted to the printer, from 1-31.
$(DocumentPageNumber)	Numeric, %d	The page number of the document being printed.

Variable	Type and Format String Place Holder	Description
$(FileExtension)	String, %s	The file extension for the type of file being created.
$(FileNumber)	Numeric, %d	The file number of the sequence of files. For multipaged output, this is always 1. For serialized output this is the number of the file in the sequence.
$(Hour)	Numeric, %d	The hour in numeric format that the print job was submitted to the printer, 1-12 or 0-23 depending on your system preferences.
$(JobID)	Numeric, %d	The unique job ID used by the printer. This is set to zero when the driver is first installed and is automatically incremented by the driver at the start of every print job. The JobID is often used to ensure that all files created have unique names.
$(JobStatus)	Numeric, %d	The status of the print job, 1 for success, 0 for failure.
$(MachineName)	String, %s	The name of the computer the print job is running on.
$(Minute)	Numeric, %d	The minute in numeric format that the print job was submitted to the printer, from 0-59.
$(Month)	Numeric, %d	The month in numeric format that the print job was submitted to the printer, from 1-12.
$(OutputFileName)	String, %s	The contents of the $(OutputFileName) field. If this field is empty the name the printing application used when submitting the print job is used.
$(Second)	Numeric, %d	The second in numeric format that the print job was submitted to the printer, from 0-59.
$(UserName)	String, %s	The name of the user who submitted the print job.
$(Year)	Numeric, %d	The year in numeric format that the print job was submitted to the printer.

Output Directory

This is the same as the Output Directory on the Save tab. Changing the *Output Directory* on this

tab will change the *Output Directory* on the Save tab.

$(OutputFileName)

This is the same as the *Filename* field on the Save tab.

Changing the *%(OutputFilename)* on this tab will change the *Filename* on the Save tab.

Use default extension

Leave this box checked if you want files to be saved with the default extension for the output file type, in this case *.pdf*. If you uncheck this box, no extension will be present unless you specify one.

Restore Defaults

Restores this dialog's settings back to the initial defaults when the driver was first installed.

Help

Brings up the on-line help for this dialog.

Save

Run

When creating your output files, the creation of each file can be split into four separate stages, or events. At each one of these stages, you can specify a command or program to be run. These events, in particular the *End of job event*, are often used to perform a custom task, such as sending the file to a document management system or uploading the file to an FTP server once it has been created.

You can also use the Run commands to call functions in a DLL. See Using Run Commands to call DLL Functions for more information.
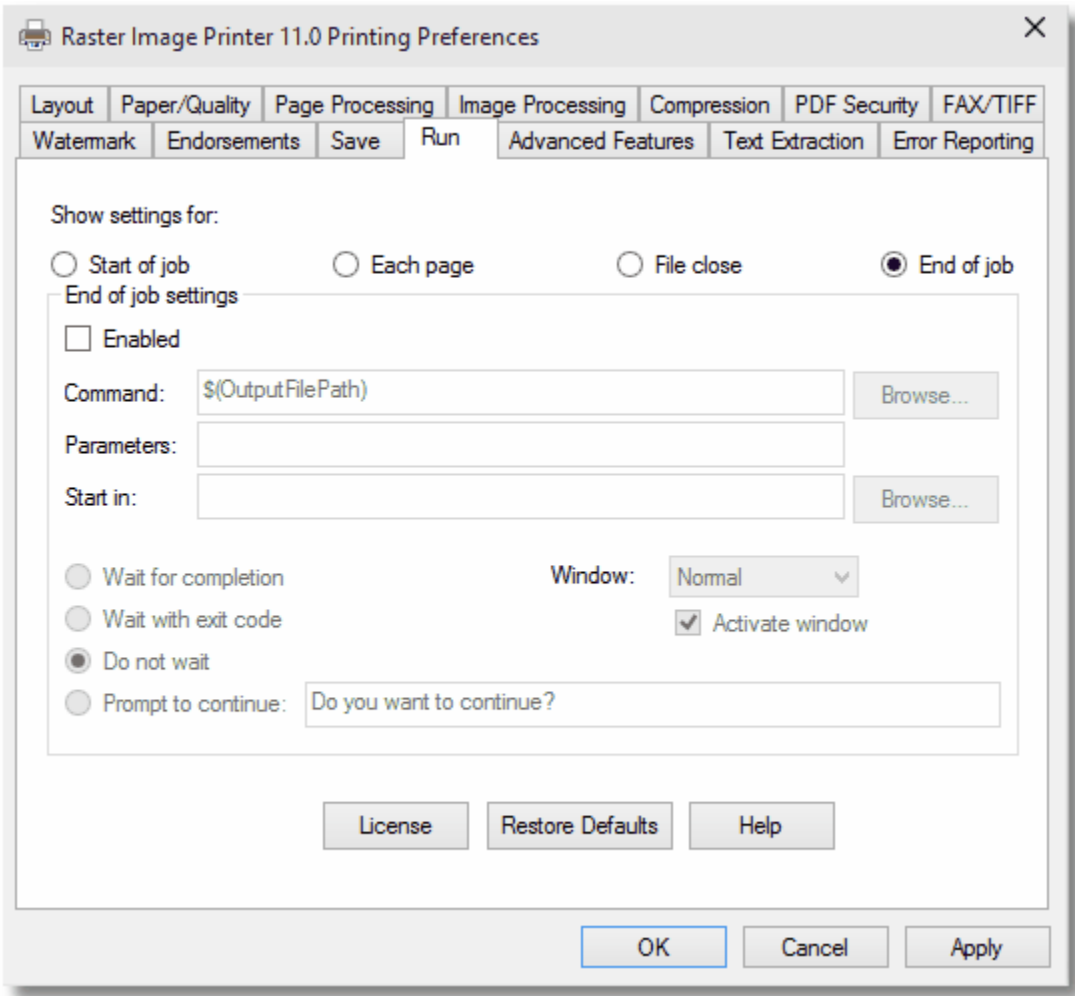
Show settings for

The four radio buttons at the top of the tab correspond to four distinct events during the printing process. You can configure a separate command to run for each event.

Stage	When it happens...
Start of job	occurs when the document is first sent to Raster Image Printer

Stage	When it happens...
Each page	each time we start processing a new page in the document
File close	each time the output file is closed; this can happen more than once for a single file
End of job	occurs when the created file (or each file if serialized output has been chosen) is complete and ready to be viewed

Event Settings

The settings shown in these fields correspond to the radio button selected above.

Enabled

Enable this check box if you want the command to run.

Command

Enter the full path to the command you want to launch. A command is limited to 128 characters in length.

The command does not have to be an executable (that is, .exe, .com, or .bat) In this case, the application associated with the file extension will open.

If the command is not an executable, and there is already an instance of the opening application running, then the Wait for completion and Wait with exit code options will not work. Instead, they will be replaced by a prompt.

Parameters

Type any parameters you need to send to your application. A list of parameters is limited to 255 characters.

When entering parameters:

- Use blank spaces to separate parameters.

- Enclose parameters that contain spaces in double quotation marks.

The default parameter for *Each Page*, *File Close* and *End of Job* is *$(OutputFilePath)*, a variable which is replaced at runtime with the file path of the current document. Parameters in the format $(variable) will be replaced by runtime values before being passed to your application.

You can also access registry data directly with the *$[registry key]* syntax, and pass environment settings from the registry as parameters to your applications. See the Retrieving environment settings topic for more information.

Start in

You can specify a default working directory for your application. Note that some applications do not allow their default working directories to be overridden. The working directory is limited to 128 characters in length.

Window

Use this drop-down list to specify the window setting for your application. Note that some applications do not allow their default window settings to be overridden.

- *Normal* - the application is displayed in its normal state. If the window is already open, and minimized or maximized, its original size is restored.

- *Maximized* - the application is displayed as a maximized window.

- *Minimized* - the application is displayed as a minimized window; its icon is visible on the task bar.

- *Hidden* - the application is launched hidden from the user

Activate window

Enable this check box if you want the window in which your application runs to be activated (that is, in the foreground).

Wait for completion

Select this option if you want the print job to wait until the command terminates.

Wait with exit code

Select this option if you want the print job to wait until the command terminates successfully. If the command exits with an error, the print job will be canceled.

Do not wait

Select this option if you do NOT want the print job to wait until the command terminates.

Prompt to continue

Select this option if you want to be prompted to continue once the command has executed. This feature allows you to review the results before accepting them. If you choose *No* from this prompt, the print job will be canceled.

You can enter a customized prompting string up to 64 characters in length.

License

Launches the *Activation Wizard* as described in the Activating Raster Image Printer section if you are in trial mode.

If you have already activated Raster Image Printer , you will see a summary of your license information (see Viewing Your Activation Status for more details)

Restore Defaults

Restores this tab's settings back to the defaults when the driver was first installed.

Help

Brings up the on-line help for this tab.

Advanced Features

The Advanced Features allow you to control the paper size and margins of the printer.
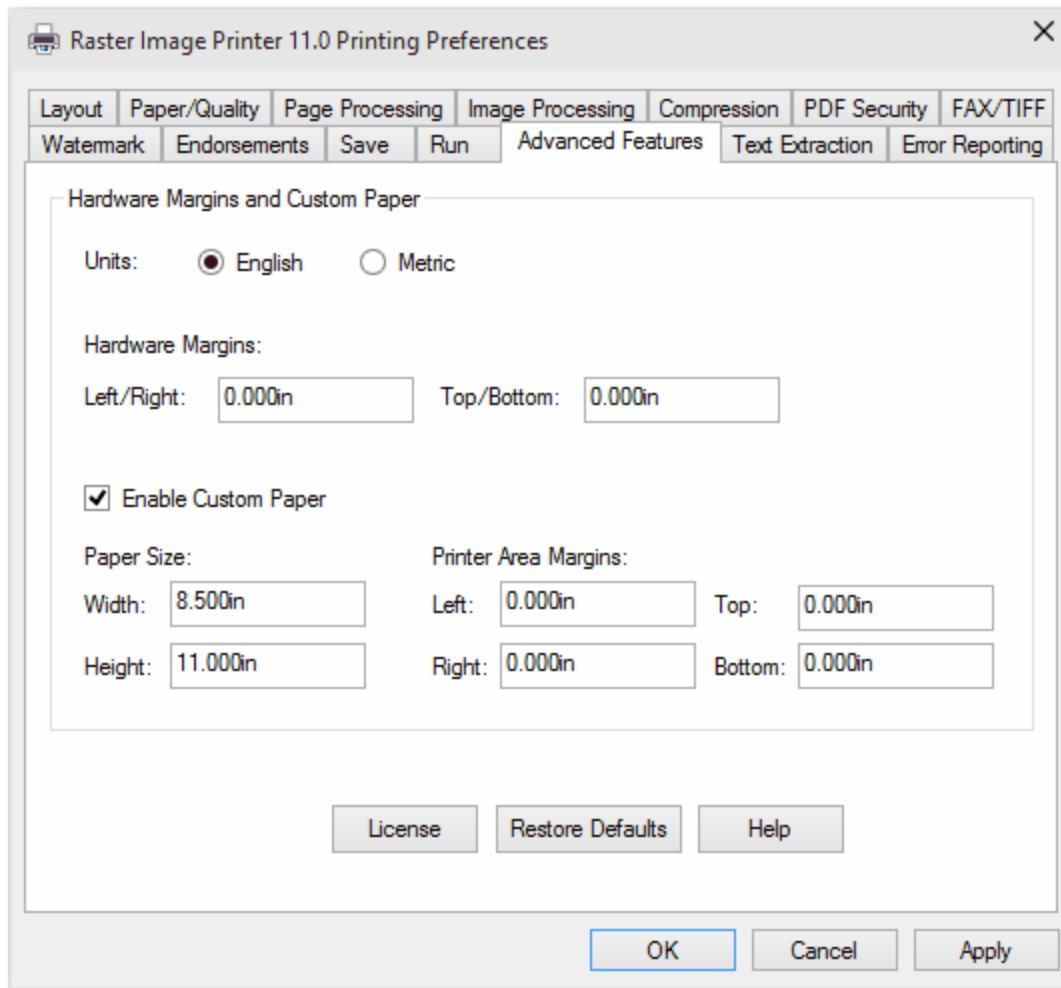
Units

Determines the unit of measure used to enter any hardware margins and paper size options. Choose *English* to enter the measurements in inches or *Metric* to enter the units in centimeters.

You can enter units with up to three digits of accuracy, or to an eighth of an inch (0.125in or 0.318cm).

Hardware Margins

The hardware margins option allows you to customize the size of the printer-supplied edge on your outputted image. Hardware margins cannot be larger than 1.00in (2.54cm) on each side of the paper.

Left/Right - Enter the Left and Right hardware margins settings into the appropriate fields.

Top/Bottom - enter in the Top and Bottom hardware margin settings into the appropriate fields.

Enable Custom Paper

Enable this check box to use a custom paper size for your output file. Note that this selection overrides any other paper size selections that you have set.

Paper Size:

Enter the desired *Width* and *Height* for the custom paper size.

Printer Area Margins:

Enter the desired *Left*, *Right*, *Top*, and *Bottom* printer area margin settings for the custom paper size.

The combined *Left* and *Right* printer area margins must be less than the *Width* of the custom paper. The combined *Top* and *Bottom* printer area margins must be less than the *Height* of the custom paper.

License

Launches the *Activation Wizard* as described in the Activating Raster Image Printer section if you are in trial mode.

If you have already activated Raster Image Printer , you will see a summary of your license information (see Viewing Your Activation Status for more details)

Restore Defaults

Restores this tab's settings back to the defaults when the driver was first installed.

Help

Brings up the on-line help for this tab.

Text Extraction

This feature will create a separate text file containing all of the textual elements of your printed document. These text files are often paired with the image or files when stored in archival systems to allow searching and retrieval of the files using textual data.
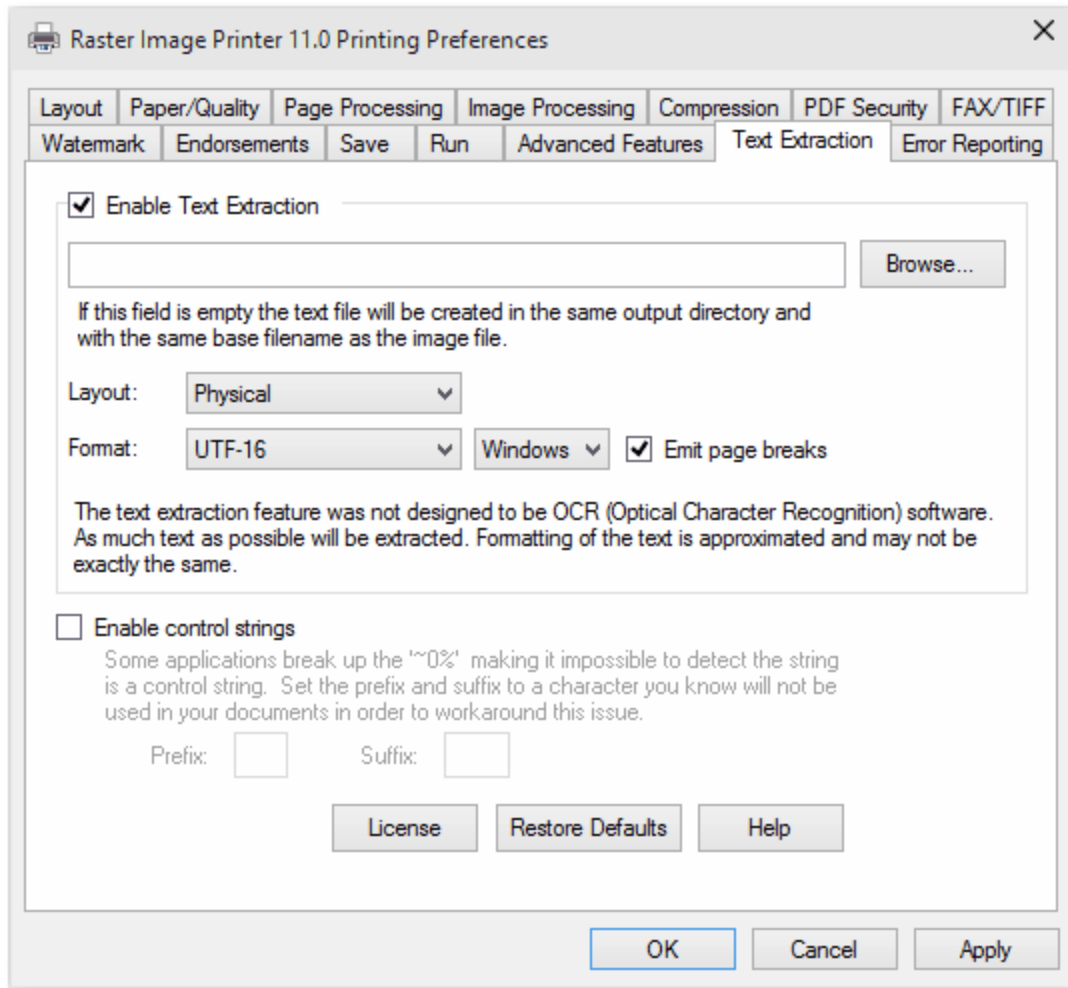
💡 The text extraction feature was not designed to be Optical Character Recognition (OCR) software. Only straight text will be extracted and formatting of the text file may not be exact.

Text Extraction

Enable Text Extraction

Enable this check box to turn on text extracting.

If you leave the field below empty a file with a *.txt* extension will be created in the same directory and named with the same name as the output file

If you want to create the text file with a particular name enter the full path to the file you want to

use for this purpose, or use the *Browse...* button to search and locate a file on disk.

Layout:

Choose the layout for the text in your file.

- *Physical* - attempts to match the format of the text in the original file.

- *Raw* - saves the text in the order in which it is was sent to the driver. This may not be the same order as the text in the original file.

- *None* - No formatting is attempted. All text is written to the file in the order in which it is received from the printing application.

Format:

Choose the encoding format and end-of-line encoding for your text file. Depending on the operating system the text file will be used on, you may need to choose the appropriate line return code.

- *UTF -16, UTF-8* - 8-bit and 16-bit Unicode encoding

- *ANSI* - uses the current ANSI code page

- *Windows* - lines end with the carriage return line feed (CRLF, \r\n) used by Windows.

- *Unix* - lines end with the line feed (LF, \n) used by UNIX.

- *Mac* - lines end with the carriage return (CR, \r) used by Macintosh

Emit Page Breaks

Enable this check box to have insert a page break, or form feed (\f) in your text file for every page in your original document.

Enable Control Strings

Enable this check box to turn on support for control strings. While you can still use control strings, this feature is being deprecated. It is retained in the driver for backwards compatibility. See Using Control Strings in the Deprecated Features section for more information.

Prefix, Suffix

By default the prefix of '~0%' and suffix of '?' are used to recognize a control string pattern in a printed document. Some applications will break this string and print each character separately, making it impossible for us to detect the control string. This features allows you to set the control string prefix and suffix to a single Unicode character value. By using this feature, products like Crystal Reports and Adobe Reader can be configured so the product recognizes control strings.

License

Launches the *Activation Wizard* as described in the Activating Raster Image Printer section if you are in trial mode.

If you have already activated Raster Image Printer , you will see a summary of your license information (see Viewing Your Activation Status for more details)

Restore Defaults

Restores this tab's settings back to the defaults when the driver was first installed.

Help

Brings up the on-line help for this tab.

Text Extraction

Error Reporting

This tab controls the error reporting features of the printer driver, including disabling the display of any error dialogs, customizing the location of any error log files created and enabling advanced debugging options.
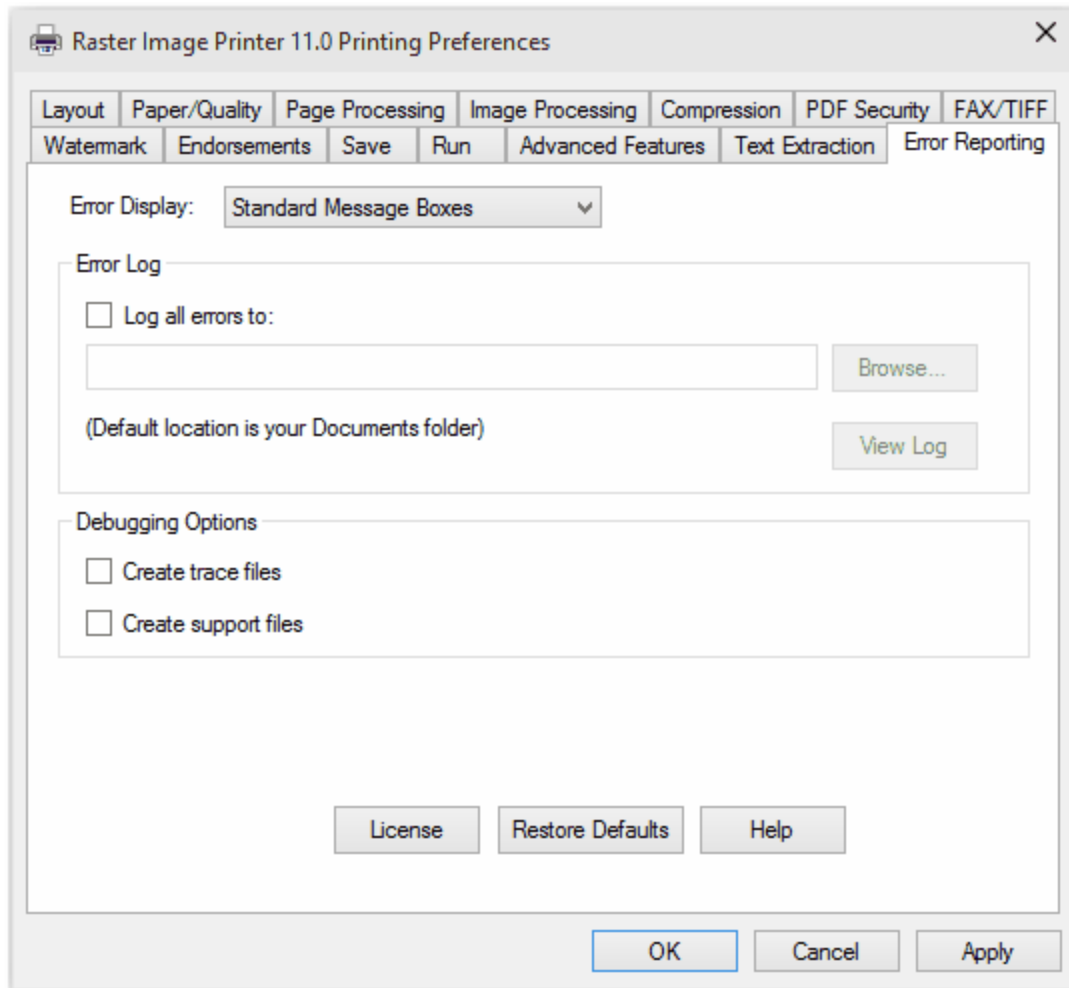
> 💡 Enabling the *Debugging Options* may slow down the printing process considerably.

Error Display

Choose how to display error messages.

- *Standard Message Boxes* - standard message dialog box that requires you to dismiss them. This is the default.

- *Timed Message Boxes* - similar to standard message dialogs, these message boxes automatically that disappear after 5 seconds

- *None* - no error messages are displayed at all.

Error Log

Log All Errors

Enable this check box to activate error logging. A log file is only created if errors occur during the printing process.

When no path is entered, all log files are created in the *Documents* folder of the %USERPROFILE% directory for the logged in user, or the user the printing process is currently running under. If you are running Windows 7 or Windows Vista, this is a folder named *Documents*. On Windows XP and earlier, this folder is called *My Documents*.

The directory name or a full path to custom log file name can be used to name the log file. A custom naming sequence is imposed on all logging files so that every job will create its own unique log file. The log file name always includes the name of the printer that printed the job. If you have renamed the printer to a custom name, or are using a copy of the printer with a different name, that name is used to create the log file names. The JobID from the Save tab is also used to create a unique filename.

The custom naming is as follows:

PNRAS11[Raster Image Printer 11.0,6-543].log

Log file name — Printer Name — Job Id in printer queue — JobID from PEERNET printer
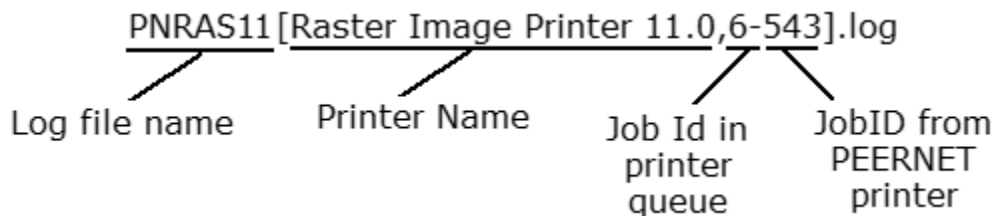
The default logging settings:
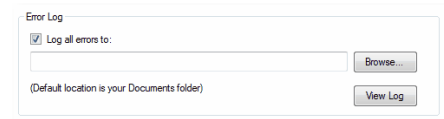
Will create log files named similar to the following, the **bolded** numbers will change for each print job:

```
%USERPROFILE%\Documents\PNRAS11[Raster Image Printer 11.0,6-50].log
```

Customizing the output folder for the log file as shown:
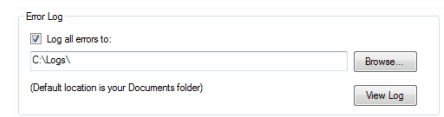
Will create log files in the folder *C:\Logs* and named similar to the following; the **bolded** numbers will change for each print job:

```
C:\Logs\PNRAS11[Raster Image Printer 11.0,7-51].log
```

Customizing the name and location of the log file as shown:
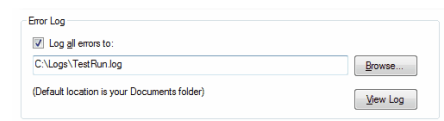
Will create log files with a base name of *TestRun* and located in the folder *C:\Logs;* the **bolded** numbers will change for each print job:

```
C:\Logs\TestRun[Raster Image Printer 11.0,8-53].log
```

Browse

Use this button to set the folder and name of the log file by browsing to an existing log file on your computer.

View Log

Click this button to open the folder where the log files are being saved.

Debugging Options

Create trace files

Enable this check box to create detailed trace files for debugging purposes. The trace files are always created in the Windows temp folder (%TEMP%) for the currently logged in user or the user the printing process is currently running under. The tracing files follow the same naming sequence as the log files but the base name and location cannot be changed.
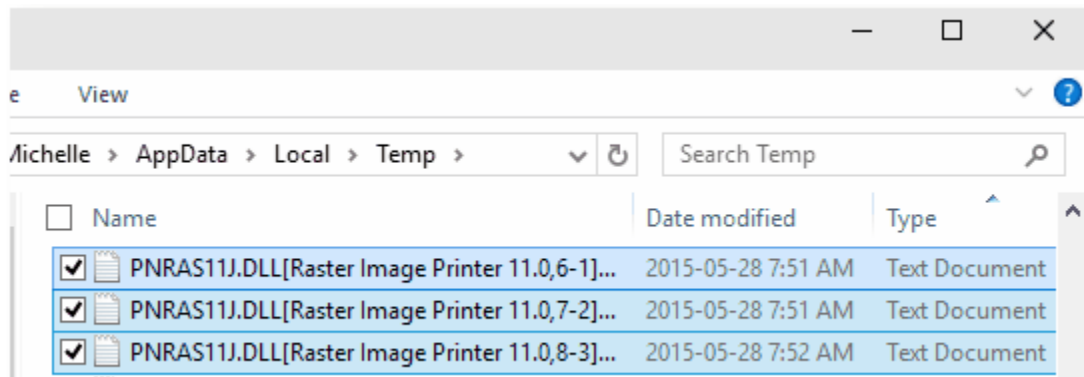
Create support files

Enable this check box to create a support file that can be sent to PEERNET support for further analysis. These files can be very large and should only be sent upon request by a PEERNET support technician. The trace files are always created in the Windows temp folder (%TEMP%) for the currently logged in user or the user the printing process is currently running under. The tracing files follow the same naming sequence as the log files but the base name and location cannot be changed.

License

Launches the *Activation Wizard* as described in the Activating Raster Image Printer section if you are in trial mode.

If you have already activated Raster Image Printer , you will see a summary of your license information (see Viewing Your Activation Status for more details)

Restore Defaults

Restores this tab's settings back to the defaults when the driver was first installed.

Help

Brings up the on-line help for this tab.

Raster Image Printer Advanced Concepts

The following topics describe the more advanced functionality of Raster Image Printer. If you only need to create images and PDF files from applications on your desktop you most likely will not need the following information.

These topics are geared towards programmers who need to automate printing to the Raster Image Printer in their own software, or IT personnel who need to install the driver over a network or use push software such as SMS to distribute the driver to users and computers within an organization.

Customizing Driver Defaults

Raster Image Printer is installed with pre-determined, or factory defaults, for all of its settings. The installation program also creates a folder containing all the setup files to the Raster Image Printer installation folder on your hard disk.

If you have installed the driver in the default location, the setup files will be located in the following folder:

C:\Program Files\Raster Image Printer 11.0\Setups

You can use the PNRAS11C.INI configuration file in this folder to customize the install to your specifications, including:

- change the factory defaults

- installing the driver on other machines with customized settings

- controlling which of the property pages (tabs) are visible on the Printing Preferences dialog

Applying the Driver Changes

If you make changes to the PNRAS11C.INI configuration file in the /*Setups* folder, you will need to run the *PNSetup.exe* program , also located in the **/Setups** folder, to (re)install the printer and see your changes. Alternatively, you can copy the edited PNRAS11C.INI into the following folder:

On a 32-bit operating system:	*C:\Windows\System32\spool\drivers\w32x86\3*
On a 64-bit operating system:	*C:\Windows\System32\spool\drivers\x64\3*

> **Windows Vista and Windows 7 Permissions**
> On Windows Vista and Windows 7 operating systems you will need administrative permissions to access this folder.

Important Configuration File Changes

If you are using the configuration file to customize the printer driver defaults, the following table outlines the configuration file sections, names and values that have changes from previous releases of the Raster Image Printer, and what the new sections, name and values are for the current version of Raster Image Printer.

PEERNET.DRV ePRO 6.0 Raster Image Printer 7.0		Raster Image Printer 8.0 Raster Image Printer 9.0 Raster Image Printer 10.0 Raster Image Printer 11.0	
Section	**Keyword**	**Section**	**Keyword(s) / Changes**
[File]	Format	[Save]	Output File Format
	Append	[Save]	Append
	File type	[Save]	Output File Format
	Bit depth	[Save]	Color reduction
	Compression method	[TIFF File Format]	BW compression Color compression Indexed compression Greyscale compression
	JPEG quality	[JPEG File Format]	Color compression Greyscale compression
	Dithering method	[Save]	Dithering method
	Progressive passes	*Deprecated*	*Deprecated*
	Page resize	[Processing]	Resample Resample Unit Resample Lock Aspect Ratio Resample Pixels Width Resample Pixels Heigh Resample Width Percentage Resample Height Percentage Resample X DPI Resample Y DPI
	Rotate landscape	[Processing]	Rotate landscape Rotate portrait
	Antialias	*Deprecated*	*Deprecated*
[Custom paper]		[Advanced Features]	Custom Paper Enable
	Width		Custom Paper Width
	Height		Custom Paper Height
[Processing]	Crop Crop left	[Processing]	Crop Crop Option

PEERNET.DRV ePRO 6.0 Raster Image Printer 7.0		Raster Image Printer 8.0 Raster Image Printer 9.0 Raster Image Printer 10.0 Raster Image Printer 11.0	
Section	**Keyword**	**Section**	**Keyword(s) / Changes**
	Crop top Crop width Crop height		Crop left Crop top Crop width Crop height Crop margin left Crop margin top Crop margin right Crop margin bottom
[Processing]	Copy=0 Copy to width= Copy to height= Copy at X= Copy at Y= Copy H align=Left Copy V align=Top	[Processing]	Copy Copy to width Copy to height Copy to IAM Left Copy to IAM Top Copy to IAM Right Copy to IAM Bottom Copy H align Copy V align Copy Page Scaling Copy Page Scaling Shrink Larger Copy Page Lock Aspect Ratio
[Processing]	Brightness Adjust	[Processing]	Value range has changed from 0-200, new range is -100 - 100.
[Watermark]	Portrait brightness Landscape brightness	[Watermark]	Value range has changed from 0-100, new range is -100 - 100

Editing the Configuration File

To change the default settings (factory defaults), you need to edit the PNRAS11C.INI configuration file.

The configuration file contains the following sections that match to the tabs on the Printing Preferences dialog. Each section of the configuration file is described in detail by following the links below.

> ⚠️ **Important Changes for Raster Image Printer 11.0**
> The configuration file section names and values have been modified from what was used in earlier versions of Raster Image Printer. These changes were done to accommodate underlying improvements in the software as well as to make the configuration file easier to read.
>
> New sections have been added, some properties have been renamed, moved between sections or removed completely, and some properties now use different values
>
> Most older sections, names and values are backwards compatible but it is highly recommended that you update any customized configuration file to use the new section, names and values as listed in Important Configuration File Changes.

For more information on the *[Scripting file]* section, see Automating the Printing Process.

Configuration File Section	Printing Preferences Tab
[Property pages]	N/A
[Scripting file]	For more information on this section, see Using the Configuration File to Indicate the Script File.
[Devmode settings]	Layout Paper/Quality
[Image Options]	FAX/TIFF
[TIFF File Format]	Compression
[JPEG File Format]	Compression
[PDF File Format]	Compression
[PDF Security]	PDF Security
[Watermark]	Watermark
[Processing]	Page Processing Image Processing
[Endorsements]	Endorsements
[Save]	Save
[Run]	Run
[Advanced Features]	Advanced Features Text Extraction
[Error Reporting]	Error Reporting

[Property Pages]

This section controls which property pages on the Printing Preferences dialog are visible to the end user. The Layout and Paper/Quality tabs are supplied by the Windows printing subsystem and cannot be hidden. All other tabs can be controlled. Each property page, or tab, can be individually set to 0 (not visible) or 1 (visible). By default, all of the property pages are visible (1).

```
[Property pages]Save=1
Run=1
Watermark=1
Advanced Features=1
Error Reporting=1
Page Processing=1
Image Processing=1
Text Extraction=1
Compression=1
Image Options=1
PDF Security=1
Endorsements=1
```

[Scripting file]

The configuration file can be used to enforce the same printing defaults for all uses at runtime by setting the configuration file as the *master script file*. For more information on the *[Scripting file]* section, see Automating the Printing Process.

Keyword	Accepted Value	Description
Use_this_file_as_master_script	**FALSE** True	Uses the configuration file as the master script file.
Script	PATH	Full path to the script file.

[Devmode settings]

Table values in **bold** text are the default value for that setting.

Keyword	Accepted Value	Description
Orientation	**Portrait** Landscape	Paper orientation
Resolution	1200, 720, 600, 400, 360, **300**, 254, 240, 200, 150, 120, 100, 75, 60, 50	Number of dots per inch
Color	**1 = Color** 0 = Black and white	Print files in color or black and white
Paper Size	**Letter** Letter Small Tabloid Legal Statement Executive A3 A4 A4 Small A5 B4 B5 Folio Quarto 10x14 11x17 Note Envelope #9 Envelope #10 Envelope #11 Envelope #12 Envelope #14 C Size Sheet D Size Sheet E Size Sheet F Size Sheet Envelope DL Envelope C5 Envelope C3 Envelope C4 Envelope C6 Envelope C65 Envelope B4 Envelope B5 Envelope B6 Envelope Italy Envelope Monarch Envelope Personal US Std Fanfold German Std Fanfold	Standard paper sizes available. Other custom paper sizes are also available.

Customizing Driver Defaults

Keyword	Accepted Value	Description
	German Legal Fanfold ISO B4 Japanese Postcard 9x11 10x11 15x11 Envelope Invite Letter Extra Legal Extra Tabloid Extra A4 Extra Letter Transverse A4 Transverse Letter Extra Transverse A Plus B Plus Letter Plus A4 Plus A5 Transverse B5 Transverse A3 Extra A5 Extra B5 Extra A3 Transverse A3 Extra Transverse A1 594 x 841 mm A0 841 x 1189 mm B3 (ISO) 353 x 500 mm B2 (ISO) 500 x 707 mm B1 (ISO) 707 x 1000 mm B3 (JIS) 364 x 515 mm B2 (JIS) 515 x 728 mm B1 (JIS) 728 x 1030 mm B0 (JIS) 1030 x 1456 mm	

[Image Options]

Table values in **bold** text are the default value for that setting.

Keywords	Accepted Values	Description
Fax	**0**	Do not create a fax resolution TIFF image
	1	Create a fax resolution TIFF image as determined by Fax Profile and Fax Resolution settings
Fax Profile	**0**	Profile F
	1	Profile S
	2	Profile C
Fax Resolution	0	200 x 100 resolution (Profile S, F)
	1	200 x 200 resolution (Profile S, F, C)
	2	204 x 98 resolution (Profile S, F)
	3	204 x 196 resolution (Profile S, F)
	4	300 x 300 resolution (Profile F, C)
	5	400 x 400 resolution (Profile F, C)
	6	408 x 391 resolution (Profile F)
	7	204 x 391 resolution (Profile F)
	8	300 x 600 resolution (Profile F)
	9	400 x 800 resolution (Profile F)
	10	600 x 600 resolution (Profile F, C)
	11	600 x 1200 resolution (Profile F)
	12	1200 x 1200 resolution (Profile F, C)
	13	100 x 100 resolution (Profile F, C)
Fax Use Printer Resolution	**0**	Do not use printer resolution
	1	Use printer resolution.
Fax Paper Width	**0**	Letter
	1	Legal
	2	A4 (ISO)
	3	B4 (ISO)
	4	A3 (ISO)
	5	Auto

Keywords	Accepted Values	Description
Fax Paper Height	0	Variable height
	1	Fixed height
Fax Page Scaling	0	Fit to Page
	1	Actual Size
Fax Page Scaling Auto Rotate	0	Do not auto-rotate the page
	1	Auto-rotate the page if needed
Fax Page Scaling Lock Aspect Ratio	0	Do not maintain fax page aspect ratio when scaling.
	1	Maintain fax page aspect ratio when scaling.
Fax Page Scaling Shrink Larger	0	Do not shrink fax to fit on page
	1	Shrink fax to fit on page
Fax Page Scaling H Align	Left	Align image left
	Middle	Align image in the center
	Right	Align image right
Fax Page Scaling V Align	Top	Align image top
	Middle	Align image in the center
	Bottom	Align image bottom
Fax Page Use 256 Greyscale Palette	**0**	Use the smaller 64 grayscale palette
	1	Use 256 grayscale palette
Fill order	LSB2MSB	Least significant bit to most significant bit
	MSB2LSB	Most significant bit to least significant bit
EOLs Byte Aligned	0	EOLs not byte aligned (no fillbits)
	1	EOLs byte aligned (use fillbits)
Photometric	**MinIsWhite**	
	MinIsBlack	
Include DateTime	0	DateTime field not included in file
	1	DateTime field included in file
Motorola Format	**0**	Use Intel byte order
	1	Use Motorola byte order

Keywords	Accepted Values	Description
Rotate portrait	**0**, 90, 180, or 270	Degrees of rotation (counter-clockwise)
Rotate landscape	**0**, 90, 180, or 270	Degrees of rotation (counter-clockwise)

[TIFF File Format]

Table values in **bold** text are the default value for that setting.

Keyword	Accepted Values	Description
BW compression	None	No black and white compression
	Group4	CCITT Group4 Fax compression
	Group3-2D	CCITT Group3 2D Fax compression
	Group3-1D	CCITT Group3 1D Fax compression
	MH	CCITT Modified Huffman compression
	LZW	LZW compression
	Packbits	Packbits (RLE) compression
Color compression	Uncompressed RGB	No color compression
	Uncompressed CMYK	No color compression, CMYK color
	Packbits RGB	Packbits (RLE) compression
	Packbits CMYK	Packbits (RLE) compression, CMYK color
	High quality JPEG	High quality JPEG compression
	Medium quality JPEG	Medium quality JPEG compression
	Low quality JPEG	Low quality JPEG compression
	LZW RGB	LZW compression
	LZW CMYK	LZW compression, CMYK color
Indexed compression	Uncompressed	No color compression
	Packbits	Packbits (RLE) compression
	High quality JPEG	High quality JPEG compression
	Medium quality JPEG	Medium quality JPEG compression
	Low quality JPEG	Low quality JPEG compression
	LZW	LZW compression
Greyscale compression	Uncompressed	No color compression
	Packbits	Packbits (RLE) compression
	High quality JPEG	High quality JPEG compression
	Medium quality JPEG	Medium quality JPEG compression
	Low quality JPEG	Low quality JPEG compression
	LZW	LZW compression

[JPEG File Format]

Table values in **bold** text are the default value for that setting.

Keyword	Accepted Values	Description
Color compression	High Quality	High quality JPEG compression
	Medium Quality	Medium quality JPEG compression
	Low Quality	Low quality JPEG compression
Greyscale compression	High Quality	*same as color compression above*
	Medium Quality	
	Low Quality	

[PDF File Format]

Table values in **bold** text are the default value for that setting.

Keyword	Accepted Values	Description
Use compression	0	Do not compress the file.
	1	Enable compression for the file.
Use ASCII	**0**	No ASCII format compression
	1	Enable ASCII format compression
PDF Standard	**None**	Create PDF files that are not PDF/A-1b compliant
	PDF/A-1b	Create PDF/A-1b compliant PDF files
Content encoding	None	No compression
	ZIP	ZIP compression
	RLE	Packbits (run length) compression
	LZW	LZW compression
Color compression	None	No color compression
	ZIP	ZIP compression
	RLE	Packbits (run length) compression
	JPEG High	High quality JPEG compression
	JPEG Medium	Medium quality JPEG compression
	JPEG Low	Low quality JPEG compression
	LZW	LZW compression
Greyscale compression	None	No compression on greyscale images
	ZIP	ZIP compression
	RLE	Packbits (run length) compression
	JPEG High	High quality JPEG compression
	JPEG Medium	Medium quality JPEG compression
	JPEG Low	Low quality JPEG compression
	LZW	LZW compression
Indexed compression	None	No compression on indexed color images
	ZIP	ZIP compression
	RLE	Packbits (run length) compression
	JPEG High	High quality JPEG compression

Keyword	Accepted Values	Description
	JPEG Medium	Medium quality JPEG compression
	JPEG Low	Low quality JPEG compression
	LZW	LZW compression
BW compression	None	No black and white compression
	Group4	CCITT Group4 Fax compression
	Group3-2D	CCITT Group3 2D Fax compression
	Group3-1D	CCITT Group3 1D Fax compression

[PDF Security]

Table values in **bold** text are the default value for that setting.

Keywords	Accepted Values	Description
Use Security	**0**	No PDF security
	1	Enable PDF security
Encrypt Level	**0**	Sets 40-bit encryption level
	1	Sets 128-bit encryption level
Can Copy	**0**	Do not allow users to copy text and graphics
	1	Allow users to copy text and graphics
Can Print	0	Do not allow users to print the document
	1	Allow users to print the document
Can Change Doc	**0**	Do not allow users to change the document
	1	Allow users to change the document
Can ChangeOther	**0**	Do not allow users to add or change comments and form fields
	1	Allow users to add or change comments and form fields
User Pswd On	**0**	No user password required to open document
	1	User password required to open document
User Pswd	User password	The user password
Owner Pswd On	**0**	No owner password required to change document
	1	Owner password required to change document
Owner Pswd	Owner password	The owner password

[Watermark]

Table values in **bold** text are the default value for that setting.

[Keywords]	Accepted Values	Description
Enable	**0**	Disabled
	1	Enabled
First page only	0	Watermark every page
	1	Watermark first page only
Portrait image	PATH	Path to watermark image for portrait pages
Portrait position	**Stretch**	Stretch to fit page
	Tile	Tile across and down page
	Center	Center on page
Portrait brightness	-100 - 100 (default is **0**)	-100 to -1 - darkens the image **0** - no change 1 to 100 - lightens the image
Landscape image	PATH	Path to watermark image for landscape images
Landscape position	**Stretch**	Stretch to fit page
	Tile	Tile across and down page
	Center	Center on page
Landscape brightness	-100 - 100 (default is **0**)	-100 to -1 - darkens the image **0** - no change 1 to 100 - lightens the image

[Processing]

Table values in **bold** text are the default value for that setting.

> 💡 **Measurement Units**
> The configuration file now accepts units entered in inches (8.50in) or centimeters (21.59cm), provided the unit designation of inches (in) or centimeters (cm) is given.
>
> To maintain compatibility with previous versions of the driver, the old method of entering units in as hundredths of an inch (.01 Inches) or tenths of a millimeter(.1 Millimeters) is still supported.

Keywords	Accepted Values	Description
Units	**.01 Inches**	Units are in hundredths of an inch
	.1 Millimeters	Units are in tenths of a millimeter
Trim left	**0**	Do not trim left side of page
	1	Trim left side of page
Trim top	**0**	Do not trim top of page
	1	Trim top of page
Trim right	**0**	Do not trim right side of page
	1	Trim top of page
Trim bottom	**0**	Do not trim bottom of page
	1	Trim top of page
Trim Threshold	0-100 (default = **0**)	Color intensity used to limit trim color
Crop	**0**	Disable cropping
	1	Enable cropping
Crop Option	0	Crop region
	1	Crop margins
Crop left (Crop Option = region)	0 - 8000000 (default = **0**)	Range in hundredths of an inch
	0 - 20000000 (default = **0**)	Range in tenths of a millimeter
	0.000in - 80000.000in	Range in inches
	0.000cm - 200000.000cm	Range in centimeters
Crop top (Crop Option = region)	(0 - 8000000 (default = **0**)	Range in hundredths of an inch

Keywords	Accepted Values	Description
	0 - 20000000 (default = **0**)	Range in tenths of a millimeter
	0.000in - 80000.000in	Range in inches
	0.000cm - 200000.000cm	Range in centimeters
Crop width (Crop Option = region)	0 - 8000000 (default = **0**)	Range in hundredths of an inch
	0 - 20000000 (default = **0**)	Range in tenths of a millimeter
	0.000in - 80000.000in	Range in inches
	0.000cm - 200000.000cm	Range in centimeters
Crop height (Crop Option = region)	0 - 8000000 (default = **0**)	Range in hundredths of an inch
	0 - 20000000 (default = **0**)	Range in tenths of a millimeter
	0.000in - 80000.000in	Range in inches
	0.000cm - 200000.000cm	Range in centimeters
Crop margin left (Crop Option = margins)	0 - 8000000 (default = **0**)	Range in hundredths of an inch
	0 - 20000000 (default = **0**)	Range in tenths of a millimeter
	0.000in - 80000.000in	Range in inches
	0.000cm - 200000.000cm	Range in centimeters
Crop margin top (Crop Option = margins)	0 - 8000000 (default = **0**)	Range in hundredths of an inch
	0 - 20000000 (default = **0**)	Range in tenths of a millimeter
	0.000in - 80000.000in	Range in inches
	0.000cm - 200000.000cm	Range in centimeters

Keywords	Accepted Values	Description
Crop margin right (Crop Option = margins)	0 - 8000000 (default = **0**)	Range in hundredths of an inch
	0 - 20000000 (default = **0**)	Range in tenths of a millimeter
	0.000in - 80000.000in	Range in inches
	0.000cm - 200000.000cm	Range in centimeters
Crop margin bottom (Crop Option = margins)	0 - 8000000 (default = **0**)	Range in hundredths of an inch
	0 - 20000000 (default = **0**)	Range in tenths of a millimeter
	0.000in - 80000.000in	Range in inches
	0.000cm - 200000.000cm	Range in centimeters
Copy	**0**	Disable Copy options
	1	Enable Copy options
Copy to width	0 - 8000000 (default = **0**)	Range in hundredths of an inch
	0 - 20000000 (default = **0**)	Range in tenths of a millimeter
	0.000in - 80000.000in	Range in inches
	0.000cm - 200000.000cm	Range in centimeters
Copy to height	0 - 8000000 (default = **0**)	Range in hundredths of an inch
	0 - 20000000 (default = **0**)	Range in tenths of a millimeter
	0.000in - 80000.000in	Range in inches
	0.000cm - 200000.000cm	Range in centimeters
Copy to IAM Left	0 - 8000000 (default = **0**)	Range in hundredths of an inch
	0 - 20000000 (default = **0**)	Range in tenths of a millimeter

Keywords	Accepted Values	Description
	0.000in - 80000.000in	Range in inches
	0.000cm - 200000.000cm	Range in centimeters
Copy to IAM Top	0 - 8000000 (default = **0**)	Range in hundredths of an inch
	0 - 20000000 (default = **0**)	Range in tenths of a millimeter
	0.000in - 80000.000in	Range in inches
	0.000cm - 200000.000cm	Range in centimeters
Copy to IAM Right	0 - 8000000 (default = **0**)	Range in hundredths of an inch
	0 - 20000000 (default = **0**)	Range in tenths of a millimeter
	0.000in - 80000.000in	Range in inches
	0.000cm - 200000.000cm	Range in centimeters
Copy to IAM Bottom	0 - 8000000 (default = **0**)	Range in hundredths of an inch
	0 - 20000000 (default = **0**)	Range in tenths of a millimeter
	0.000in - 80000.000in	Range in inches
	0.000cm - 200000.000cm	Range in centimeters
Copy H align	Left	Align the copied image horizontally
	Middle	
	Right	
Copy V align	Top	Align the copied image vertically
	Middle	
	Bottom	
Copy Page Scaling	**0**	Fit to page
	1	Actual Size

Keywords	Accepted Values	Description
Copy Page Scaling Shrink Larger	0	Do not shrink page to fit
	1	Shrink page to fit
Copy Page Lock Aspect Ratio	0	Do not maintain page aspect ratio when scaling.
	1	Maintain page aspect ratio when scaling.
Resample	**0**	Disable resampling options
	1	Enable resampling options
Resample Units	**0**	Pixels
	1	Percentage
	2	DPI
Resample Lock Aspect Ratio	0	Do not maintain page aspect ratio when resampling
	1	Maintain page aspect ratio when resampling
Resample Pixels Width	0-4294967295 (default is **200**)	Desired width in pixels
Resample Pixels Height	0-4294967295 (default is **200**)	Desired height in pixels
Resample Width Percentage	1-500 (default is **100**)	Change the width as a percentage of the original size
Resample Height Percentage	1-500 (default is **100**)	Change the height as a percentage of the original size
Resample X DPI	50-3600 (default is **200**)	Change the X resolution of the image
Resample Y DPI	50-3600 (default is **200**)	Change the Y resolution of the image
Brightness Adjust	-100 - 100 (default is **0**)	-100 to -1 - darkens the image **0** - no change 1 to 100 - lightens the image
Rotate portrait	**0**, 90, 180, or 270	Degrees of rotation (counter-clockwise)
Rotate landscape	**0**, 90, 180, or 270	Degrees of rotation (counter-clockwise)

[Endorsements]

Table values in **bold** text are the default value for that setting.

> 💡 **Newlines in Endorsement Strings**
>
> If you are editing header or footer strings manually in the configuration file, or the script file, and want to include the newline character (\n) the line need to be marked as "escaped" to be passed correctly to the driver. You do not need to do this when editing the endorsement strings through the printer properties tabs.
>
> | Character | Escaped Characters to Use |
> |-----------|---------------------------|
> | \n | \x0D\x0A |
>
> **Sample INI Endorsement Section with Escaped Lines:**
>
> ```
> [Endorsements]
> Enable=1
> HeaderCenterFormat=<cdata>First Line\x0D\x0ASecondLine</cdata>
> ```

Keywords]	Accepted Values	Description
Enable	**0**	Do not add endorsements
	1	Add specified endorsements to each page
HeaderHeightInPoints		The height of the header area in points. The default is 12 points.
HeaderLeftWidthInPoints		The width of the left section of the header area in points. The default is the width of the page.
HeaderCenterWidthInPoints		The width of the center section of the header area in points. The default is the width of the page.
HeaderRightWidthInPoints		The width of the right section of the header area in points. The default is the width of the page.
HeaderLeftFormat		The text, with formatting codes as needed, to put in the left section of the header.
HeaderCenterFormat		The text, with formatting codes as needed, to put in the center section of the header.
HeaderRightFormat		The text, with formatting codes as needed, to put in the right section of the header.
FooterHeightInPoints		The height of the footer area in points. The default is 12 points.
FooterLeftWidthInPoints		The width of the left section of the footer area in points. The default is the width of the page.
FooterCenterWidthInPoints		The width of the center section of the footer area in points. The default is the width of the page.

Keywords]	Accepted Values	Description
FooterRightWidthInPoints		The width of the right section of the footer area in points. The default is the width of the page.
FooterLeftFormat		The text, with [formatting codes](#) as needed, to put in the left section of the header.
FooterCenterFormat		The text, with [formatting codes](#) as needed, to put in the center section of the header.
FooterRightFormat		The text, with [formatting codes](#) as needed, to put in the right section of the header.

[Save]

Table values in **bold** text are the default value for that setting.

Keywords]	Accepted Values	Description
Prompt	0	Prompt only if output path is invalid
	1	Always prompt for output filename
Overwrite	**0**	Prompt before overwriting files
	1	Overwrite files without prompting
Use JobID	**0**	Do not include JobID in filename
	1	Include JobID in filename
Append	**0**	Output is new file(s)
	1	Output is appended to existing file
Output directory	PATH	Output directory path, default is My Documents folder
Output filename	NAME	Base filename excluding path and extension Default is document name submitted to print job
Remove product name	0	Leave product name in filename
	1	Remove product name from filename
Remove filename extension	0	Leave product filename extension in filename
	1	Remove product filename extension from filename
Delete files	**0**	Do not delete output files at end of job
	1	Delete all output files at end of job
Output File Format	**JPEG**	JPEG (*.jpg)
	TIFF Multipaged	TIFF Multipaged (*.tif)
	TIFF Serialized	TIFF Serialized (*.tif)
	Adobe PDF Multipaged	Adobe PDF Multipaged (*.pdf)
	Adobe PDF Serialized	Adobe PDF Serialized (*.pdf)
	CompuServe GIF	CompuServe GIF (*.gif)
	CompuServe PNG	CompuServe PNG (*.png)
	Windows BMP	Windows BMP (*.bmp)
	TARGA	Targa (*.tga)

Keywords]	Accepted Values	Description
	Adobe Photoshop 3.0	Adobe Photoshop 3.0 (*.psd)
	ZSoft PCX	ZSoft PCX (*.pcx)
	ZSoft DCX	ZSoft DCX (*.dcx)
Color reduction	none	No color reduction
	Optimal	Reduce to lowest color count needed per page
	BW	Reduce to black and white using selected dithering method
	grey	Reduce to greyscale
	256Colors	Create all pages as 8-bit color (256 colors)
	16Colors	Create all pages as 4-bit color (16 colors)
	optimalMax256Colors	Reduces to lowest color count needed for each page, any pages over 256 colors are reduced to 256 colors.
	optimalMax16Colors	Reduces to lowest color count needed for each page, any pages over 16 colors are reduced to 16 colors.
Dithering method	None	No dithering
	Floyd	Floyd-Steinberg dithering
	Burkes	Burkes dithering
	Bayer	Bayer dithering
	Halftone	Halftone dithering
SplitFileEveryNPagesEnabled	**0**	File splitting based on page count is not enabled.
	1	File splitting based on page count is enabled.
SplitFileEveryNPages	0-4294967295	The page count at which to start creating a new file. Default is 1000.
SplitFileWhenFileSizeExceedsThresholdEnabled	**0**	File splitting based on file size threshold is not enabled.
	1	File splitting base on file size threshold is enabled.
SplitFileSizeThresholdInBytes	0-2147483648	The file size threshold, in bytes, at which to split the file. The file is split when the file size gets larger than this value. The default is 1073741824 bytes, or 1GB.

[Advanced File Naming]

Table values in **bold** text are the default value for that setting.

Keywords	Accepted Values	Description
Format string S	FORMAT STRING	Format string for Serialized profile (see Advanced File Naming for details)
Format string SJ	FORMAT STRING	Format string for Serialized/w JobID profile (see Advanced File Naming for details)
Format string M	FORMAT STRING	Format string for Multi-page profile (see Advanced File Naming for details)
Format string MJ	FORMAT STRING	Format string for Multi-page/w JobID profile (see Advanced File Naming for details)
Use default extension S	**1**	Use default file extension
	0	Do not use default file extension
Use default extension SJ	**1**	Use default file extension
	0	Do not use default file extension
Use default extension M	**1**	Use default file extension
	0	Do not use default file extension
Use default extension MJ	**1**	Use default file extension
	0	Do not use default file extension
Variables S	LIST OF VARIABLES	Comma-delimited list of variables that correspond to the placeholders in FORMAT STRING
Variables SJ	LIST OF VARIABLES	Comma-delimited list of variables that correspond to the placeholders in FORMAT STRING
Variables M	LIST OF VARIABLES	Comma-delimited list of variables that correspond to the placeholders in FORMAT STRING
Variables MJ	LIST OF VARIABLES	Comma-delimited list of variables that correspond to the placeholders in FORMAT STRING

Customizing Driver Defaults

[Run]

Table values in **bold** text are the default value for that setting.

Keywords	Accepted Values	Description
RunAtStart enable	**0**	Disabled
	1	Enabled
RunAtPage enable	**0**	Disabled
	1	Enabled
RunAtFile enable	**0**	Disabled
	1	Enabled
RunAtEnd enable	**0**	Disabled
	1	Enabled
RunAtStart command	Path to executable	Executable to call
	Path to file	File to open
	<Path to DLL>	DLL to load (use angle brackets)
	{EventName}	Event to signal (use curly braces)
RunAtPage command	Path to executable	Executable to call
	Path to file	File to open
	<Path to DLL>	DLL to load (use angle brackets)
	{EventName}	Event to signal (use curly braces)
RunAtFile command	Path to executable	Executable to call
	Path to file	File to open
	<Path to DLL>	DLL to load (use angle brackets)
	{EventName}	Event to signal (use curly braces)
RunAtEnd command	Path to executable	Executable to call
	Path to file	File to open
	<Path to DLL>	DLL to load (use angle brackets)
	{EventName}	Event to signal (use curly braces)
RunAtStart parameters	PARAMETER LIST	Parameters for the command
RunAtPage parameters	PARAMETER LIST	Parameters for the command
RunAtFile parameters	PARAMETER LIST	Parameters for the command
RunAtEnd parameters	PARAMETER LIST	Parameters for the command

Keywords	Accepted Values	Description
RunAtStart directory	PATH	Working directory path
	Function in DLL	DLL function to call
RunAtPage directory	PATH	Working directory path
	Function in DLL	DLL function to cal
RunAtFile directory	PATH	Working directory path
	Function in DLL	DLL function to cal
RunAtEnd directory	PATH	Working directory path
	Function in DLL	DLL function to cal
RunAtStart window	**Normal**	Window state
	Minimized	
	Maximized	
	Hidden	
RunAtPage window	**Normal**	Window state
	Minimized	
	Maximized	
	Hidden	
RunAtFile window	**Normal**	Window state
	Minimized	
	Maximized	
	Hidden	
RunAtEnd window	**Normal**	Window state
	Minimized	
	Maximized	
	Hidden	
RunAtStart window active	0	Do not activate window
	1	Activate window
RunAtPage window active	0	Do not activate window
	1	Activate window
RunAtFile window active	0	Do not activate window

Keywords	Accepted Values	Description
	1	Activate window
RunAtEnd window active	0	Do not activate window
	1	Activate window
RunAtStart wait	0	Wait for completion
	1	Wait with exit code
	2	Do not wait
	3	Prompt to continue
RunAtPage wait	0	Wait for completion
	1	Wait with exit code
	2	Do not wait
	3	Prompt to continue
RunAtFile wait	0	Wait for completion
	1	Wait with exit code
	2	Do not wait
	3	Prompt to continue
RunAtEnd wait	0	Wait for completion
	1	Wait with exit code
	2	Do not wait
	3	Prompt to continue
RunAtStart prompt	<PROMPT STRING>	Prompt string
RunAtPage prompt	<PROMPT STRING>	Prompt string
RunAtFile prompt	<PROMPT STRING>	Prompt string
RunAtEnd prompt	<PROMPT STRING>	Prompt string

[Advanced Features]

Table values in **bold** text are the default value for that setting.

> 💡 **Measurement Units**
> The configuration file now accepts units entered in inches (8.50in) or centimeters (21.59cm), provided the unit designation of inches (in) or centimeters (cm) is given.
>
> To maintain compatibility with previous versions of the driver, the old method of entering units in as hundredths of an inch (.01 Inches) or tenths of a millimeter(.1 Millimeters) is still supported.

Keywords	Accepted Values	Description
Units	**.01 Inches**	Units are in hundredths of an inch
	.1 Millimeters	Units are in tenths of a millimeter
Custom Paper Enable	**0**	Disabled
	1	Enabled
Custom Paper Width	25 - 8000000 (default = **850**)	Range in hundredths of an inch
	64 - 20000000	Range in tenths of a millimeter
	0.250in - 80000.000in	Range in inches
	0.640cm-200000.000cm	Range in centimeters
Custom Paper Height	25 - 8000000 (default = **1100**)	Range in hundredths of an inch
	64 - 20000000	Range in tenths of a millimeter
	0.250in - 80000.000in	Range in inches
	0.640cm-200000.000cm	Range in centimeters
Hardware Margin Left	0 - 100 (default = **0**)	Range in hundredths of an inch
	0 - 254	Range in tenths of a millimeter
	0.000in-1.000in	Range in inches
	0.000cm-2.540cm	Range in centimeters
Hardware Margin Top	0 - 100 (default = **0**)	Range in hundredths of an inch
	0 - 254	Range in tenths of a millimeter
	0.000in-1.000in	Range in inches
	0.000cm-2.540cm	Range in centimeters
Printer Area Margin Left	0 - 8000000 (default =	Range in hundredths of an inch

Keywords	Accepted Values	Description
	0)	
	0 - 20000000	Range in tenths of a millimeter
	0.000in - 80000.000in	Range in inches
	0.000cm-200000.000cm	Range in centimeters
Printer Area Margin Top	0 - 8000000 (default = **0**)	Range in hundredths of an inch
	0 - 20000000	Range in tenths of a millimeter
	0.000in - 80000.000in	Range in inches
	0.000cm-200000.000cm	Range in centimeters
Printer Area Margin Right	0 - 8000000 (default = **0**)	Range in hundredths of an inch
	0 - 20000000	Range in tenths of a millimeter
	0.000in - 80000.000in	Range in inches
	0.000cm-200000.000cm	Range in centimeters
Printer Area Margin Bottom	0 - 8000000 (default = **0**)	Range in hundredths of an inch
	0 - 20000000	Range in tenths of a millimeter
	0.000in - 80000.000in	Range in inches
	0.000cm-200000.000cm	Range in centimeters
Extract Text	0 (default)	Disabled
	1	Enabled
Extract Text Filepath	PATH	Path to file receiving extracted text
Extract Text Layout	**Physical**	Match the format of the text in the original file.
	Raw	Saves the text in the order in which it was sent to the driver. This may not be the same order in the original file.
	None	No formatting is attempted. All text is written to the file as it is received
Extract Text Encoding	ANSI	ASCII encoded text
	UTF-8	UTF-8 encoded text

Keywords	Accepted Values	Description
	UTF-16	UTF-16 encoded text
Extract Text EOL	**Windows**	Lines end with the CRLF line feed
	Mac	Lines end with the LF line feed
	Unix	Lines end with the CR line feed
Extract Text Emit Page Breaks	0	Page breaks are not emitted
	1	Page breaks are emitted
Control Strings Enabled	**0**	Disabled
	1	Enabled
Control String Prefix	Unicode character	The prefix to use to recognize the start of a control string pattern; default is **~0%.**
Control String Suffix	Unicode character	The suffix to use to determine the end of a control string pattern; default is **?.**

[Error Reporting]

Table values in **bold** text are the default value for that setting.

[Error Reporting]	Accepted Values	Description
Enable	**0**	Disable logging
	1	Enable logging
Log filepath	PATH	Path to log file
MessageBox style	None	Do not use message boxes
	Timed	Use timed (5 second) message boxes
	Standard	Use modal message boxes
Trace	**0**	Do not create debugging trace files
	1	Create debugging trace files
CreateSupportFiles	**0**	Do not create support files
	1	Create support files; only upon request from PEERNET support.

Installing the Customized Printer

In many cases, you will need to install your customized printer on many workstations within your office environment. The steps below outline how this can be done.

1. Install the Raster Image Printer on a single computer. You do not have to license the software at this point.

2. Make a copy of the *\Setups* subdirectory of the installation tree for your own use. Commonly the folder is copied to a shared network location accessible from the other computers.

3. In your copy of the *\Setups* folder, edit the configuration file PNRAS11C.INI as needed. The configuration file sections are outlined in the section Customizing Driver Defaults.

4. Have your installation program call *PNSetup.exe* from your */Setups* folder, or run *PNSetup.exe* directly yourself to install the driver with your desired settings.

5. License the software as needed.

> **Hint:**
> If you do not want the users to be able to edit your customized settings, you can hide the individual tabs in the Printing Preferences dialog as needed. See Hiding and Showing Property Pages for details on how to do this.

Automating with the PNSrv11 COM Interface

Automating with the PNSrv11 COM Interface

The PNSrv11 COM Interface provides the ability to control and communicate with the associated printer during the printing and file creation process. It replaces and greatly enhances the older script file methodology used in the previous versions of the printer.

Through the PNSrv11 COM Interface you can:

- set file naming and conversion preferences on a per file basis

- easily wait until the file has been created to continue your workflow

- use a pool of printers to increase processing capacity

- attach to events to add custom processing at key points

- track the files printed and the output files associated with each file

- retrieve detailed information about the output files created

- interact with the printer in a thread-safe manner

To learn more about the COM interface, you can download the PNSrv11 user guide from the Raster Image Printer Support and Documentation page.

Automating the Printing Process with the Script File

Raster Image Printer's advanced automation features allow you to accomplish the following workflow-related tasks:

- perform thread-safe batch printing and workflow management

- change driver settings "on the fly" before any print job

- display a custom dialog box at the point of print job submission

- collect and pass user data to a back-end process

- signal events at critical points during the printing process

- call functions in a user DLL at critical points during the printing process

Automation with the Raster Image Printer uses a script file named PNRAS11S.INI to control the printer settings. A script file will override any settings chosen in the Printing Preferences tabs.

A sample script file is included the *\Setups* folder created by the installation folder. If you have installed the driver in the default location, the setup files will be located in the following folder:

   C:\Program Files\Raster Image Printer 11.0\Setups\PNRAS11S.INI

⚠️ **Important Changes for User Moving from Previous Versions of Raster Image Printer**

The script file section names and values have been modified from what was used in earlier versions of Raster Image Printer. These changes were done to accommodate underlying improvements in the software as well as to make the configuration file easier to read.

New sections have been added, some properties have been renamed, moved between sections or removed completely, and some properties now use different values.The topic Important Configuration File Changes includes a table outlining the changes; the table also applies to the script file as both the configuration file and the script file use the same values.

Most older sections, names and values are backwards compatible but it is highly recommended that you update your script file to use the new section, names and values.

The default script file provided lists all the settings that can be changed. Normally, you would write to the script file only the settings you need to change. Go to Editing the Configuration File to see a listing of the values you can set in the script file; the script file uses the same values as the configuration file.

When automating, a script file should be dynamically created on an as-needed basis, and then deleted when you are finished with it. A common use of the script file is to change settings in between prints jobs, for example, to customized the name of the file created.

A pseudo-code outline of the process would look like the following:

```
1.Collect any needed information and create the script file with the
  necessary settings
2.Print the required document to the Raster Image Printer
3.Wait for the driver to signal that it has read the script file
4.Delete the script file
5.It is now safe to loop to step 1 and convert another file
```

This is only a very simple example. The above steps work for a single-threaded process but extra care must be taken when printing in multiple threads to share access to the script file. For more details on automation see the Raster Image Printer Support and Documentation page.

How Does it Work?

To see how the script file works, you can follow the steps below to try it out.

1. Copy the file C:\Program Files\Raster Image Printer 11.0\Setups\PNRAS11S.INI to your temp folder. You can find your temp folder by opening the *My Computer* icon (this is just *Computer* on Windows Vista and Window 7) and typing **%TEMP%** in the address bar then pressing **Enter**.
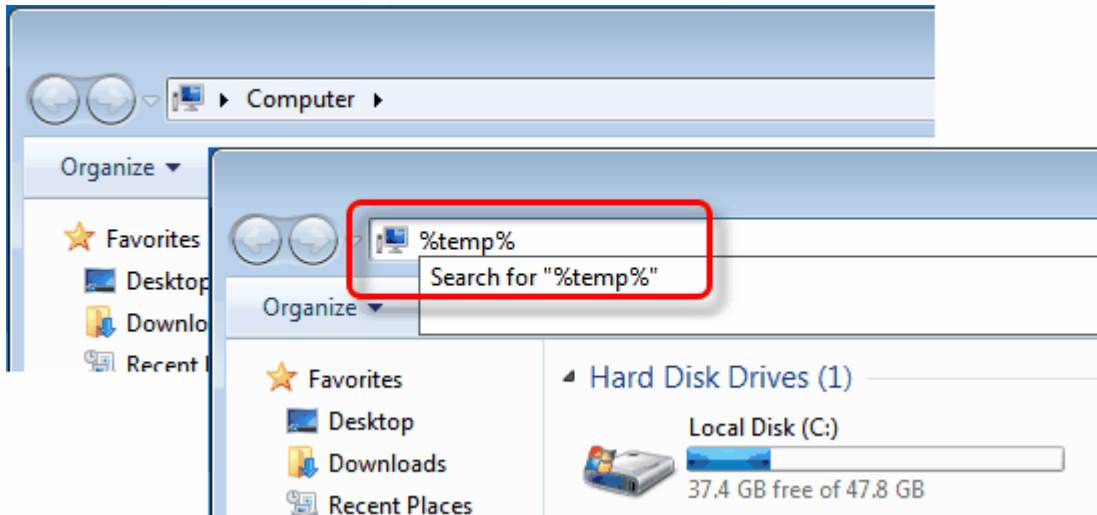
2. The script file is read-only to start, you will need to remove the read-only property on the file you just copied to your temp folder. Right-click the script file, select *Properties* from the context menu, then remove the check mark from the *Read-Only* attribute at the bottom of the *General* tab.

3. You can now change this file manually using Notepad or WordPad. Look for the **[Save]** section in the file and replace the matching lines with the changes below. These settings configure the driver to create serialized image or files with a base name of "Serial_Test", in the folder C:\Test. It will not prompt for a file name.

```
[Save]
Prompt=0
Overwrite=1
Output directory=C:\Test
Output filename=Serial_Test
Remove filename extension=1
Output File Format=JPEG
```

4. Create the output folder C:\Test.

5. Print any file to Raster Image Printer 11.0.

6. You will now see files named *Serial_Test_001.jpg, Serial_Test_002.jpg, Serial_Test_003.jpg...,* *etc.* in a folder named *C:\Test*. Other settings that you have changed in the Printing Preferences and have not set in the script file (i.e anything not on the Save tab), will still apply.

7. Experiment with some of the other settings if you want.

8. Delete the script file from the %TEMP% folder once you are finished or all other print jobs will be affected by this file.

Programmatically creating the script file.

You can use the Win32 API `WritePrivateProfileString` to edit the script file programmatically.

Important Script File Sections

There are three sections in the script file that apply to automation in particular:

[EventNames]

There are three events that can be signaled by the printer:

- CommandsProcessed
- DocumentSpooled
- DocumentCanceled.

If you are changing printer settings between print jobs, you must set the *CommandsProcessed* to the name of an event you have created and are waiting on in order to know when the printer has finished reading the script file and it is now safe to move on and change the values in the script file for the next print job.

This is to ensure that each job is matched with the appropriate settings (thread-safe batch printing in a multi-thread multi-process environment). It is the responsibility of the printing application to create and block the event. The printer will automatically signal the event when it has finished reading the script file.

The *DocumentSpooled* and *DocumentCanceled* events are signaled by the printer when the print job has finished being spooled successfully or has failed to spool, respectively.

> **Document Spooled, DocumentCanceled Events**
> These events do not mean the conversion process has completed, unless the printer is configured to "Print directly to the printer".

[User variables]

Use these variables to store information you wish to pass on to your code or to use as parameters to any program which you have attached to any one of the Run events. There are 10 user variables available to use, *Var0 - Var9*. When referencing these variables as a parameter, they require the macro expansion syntax - $(Var0)-$(Var9).

[User Exit 1], [User Exit 1.x64]

This user exit is invoked when an application starts to print and gives you an opportunity to augment the information or gather additional information that needs to be part of this conversion process. For example, you could prompt for fax information or have the user select from a preset list of locations to store the file.

This user exit calls a function contained in a DLL that you have produced. The `[User Exit 1]` section is used by 32-bit applications. The `[User Exit 1.x64]` is used on 64-bit operating systems. If you are using the User Exits and need to support both 32-bit and 64-bit operating systems, you will need to provide both a 32-bit and a 64-bit version of your DLL.

```
[User Exit 1]
Path=C:\Test\MyUserExit.dll
Function=GatherFaxInformation
FunctionEx=

[User Exit 1.x64]1
Path=C:\Test\MyUserExit64.dll
Function=GatherFaxInformation
FunctionEx=
```

The functions in the DLL have the following prototypes:

```
BOOL APIENTRY MyUserExitFunction(HANDLE hCommandFile,LPCSTR pszDocument)

BOOL APIENTRY MyUserExitFunctionEx(HANDLE hCommandFile,
                                   HANDLE hPrinter,
                                   DWORD dwJobID,
                                   LPCWSTR pwszDocument)
```

The first argument is a file handle that you can use with the `WriteFile` Win32 API to write control strings (see Using control strings). Be sure to end each line with an end of line (\n) character.

Writing control strings to the *hCommandFile* allows you to change the printer settings, set user variables, or even cancel the job before it is queued.

The standard prototype `MyUserExitFunction` receives the document name as its only other argument.

The extended version, `MyUserExitFunctionEx,` receives the printer handle and job identifier, in addition to the document name (in Unicode string format).

If either function returns FALSE, the job is canceled and any Run At events are not executed. If you want any Run At events to execute, use a control string to set CancelJob to 1, and return TRUE.

The user exit DLL is unloaded as soon as the call returns.

For back-end processing and workflow integration, you can use the Run At events to launch applications, call DLL functions, or signal events. For more information, see the Using Run Commands to Call DLL Functions topic.

> **Note:**
> If both MyUserExitFunction and MyUserExitFunctionEx are specified in the INI file, the MyUserExitFunctionEx takes precedence.

Creating Copies of the Printer

If you are automating the printing process using the script file it is a good practice to use a copy of the printer for your automation process to use. This allows you to automate and not interfere with the regular use of the printer. This also protects your automation process from other programs and process who may be using this printer as well.

It is also good practice to associate a unique script file with each printer. See the next section for details on how to do this.

1. From the Start menu use go to Programs - Raster Image Printer 11.0 - Copy Printer...

2. Type in a name for your new printer instance and click **OK**.
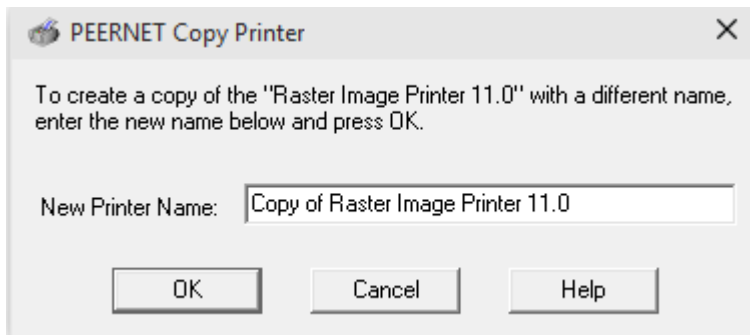
To create a copy of the printer programmatically, you can call *PNCopyPrinter11.exe* from the command line as shown:

C:\Program Files\Raster Image Printer 11.0\Setups\PNCopyPrinter11.exe "Raster Image Printer 11.0" "My New Printer"

> **Note:**
> Uninstalling the printer driver through *Add/Remove Programs* will remove all instances of the printer from your computer. Deleting a printer from the *Printers and Faxes* windows does not remove the printer driver, just the printer icon from the Printers and Faxes window.

Using Separate Script Files for Each Copy of the Printer

If you create multiple copies of the printer on the same machine, the same script file applies to all. To use a separate script file for each printer, you can add a registry key to the registry information for each printer. This registry key tells the printer where to look for it's script file.

1) Open the registry key for the desired printer. Here we are opening the registry key for the printer named *My Raster Printer*.

    `HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Print\Printers\`**`My`**
      `Raster Printer``\PrinterDriverData`

2) Create a new string value named *Scripting file*.

3) Set the data in the new string value to the complete path to the script file to use with this printer, for example:

    a) `C:\Scripts\MyRasterPrintersS.INI`
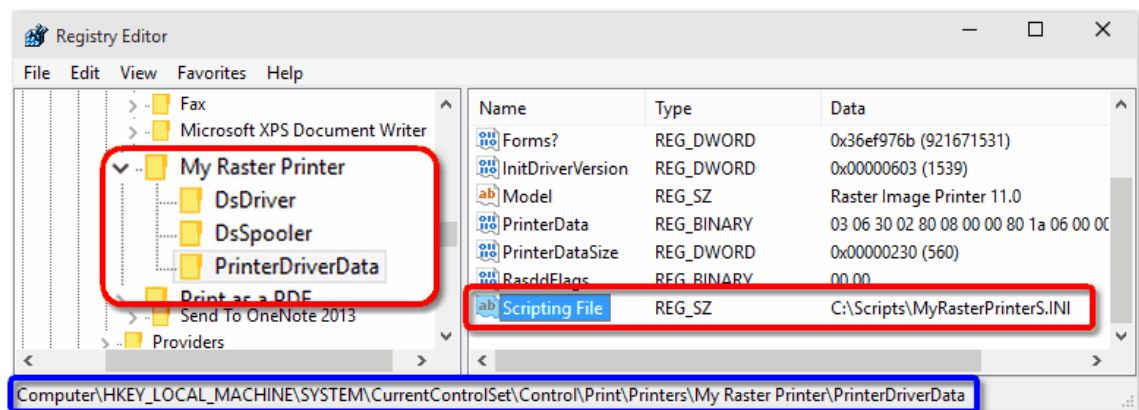
Using the Configuration File to Indicate the Script File

Using the configuration file to indicate the script file

To enforce the same printing defaults for all users at runtime, you can use the configuration file as the master script file. See Editing the Configuration File for more details on changing the configuration file.

To use the configuration file as the script file, make your desired changes to the PNRAS11C.INI configuration file and change *the Use_this_file_as_master_script* value to **TRUE** in the [Scripting file] section.

```
[Scripting file]
Use_this_file_as_master_script=TRUE
```

To specify a different file to be used as the script file (for all users), enter the following lines in the [Scripting file] section:

```
[Scripting file]
Use_this_file_as_master_script=FALSE
Script=C:\Scripts\MyPrinterSettings.INI
```

> If you do not specify the full path for the script file (i.e. Script=MyScript.INI), the driver will assume the file is located in the %Temp% directory.

If you do use the configuration file to determine the location of the script file, you will need to follow the steps in Editing the Configuration File regarding changing the file, and the steps in Installing the Customized Printer to (re)install the printer with the new, modified settings.

Settings Max Jobs

Setting Max Jobs

The Raster Image Printer will by default process print jobs in parallel. The higher the number of print jobs processed at a time, the greater the demand on your system resources.

To control this, you can set the maximum number of jobs that can be run at any one time. This limit is shared between all version 11.0 drivers on your computer. By default this limit is set to 0, meaning there is no limit. This is fine for anyone using the print driver interactively as part of their daily tasks.

If you are automating using the Raster Image Printer, it is very easy to flood the print queue with print jobs and overload your system. If you are porting your automation code from the version 6.0 drivers, there is a chance that you will need to set this limit. Any automation code that "fills" the print queue with spooled documents will likely run into this scenario.

To set the max job limit:

1. Go to Start – All Programs - Raster Image Printer 11.0 - Set Max Jobs.

2. Enter in how many jobs you wish to run in parallel. A value of 0 means there is no limit to the number of jobs.
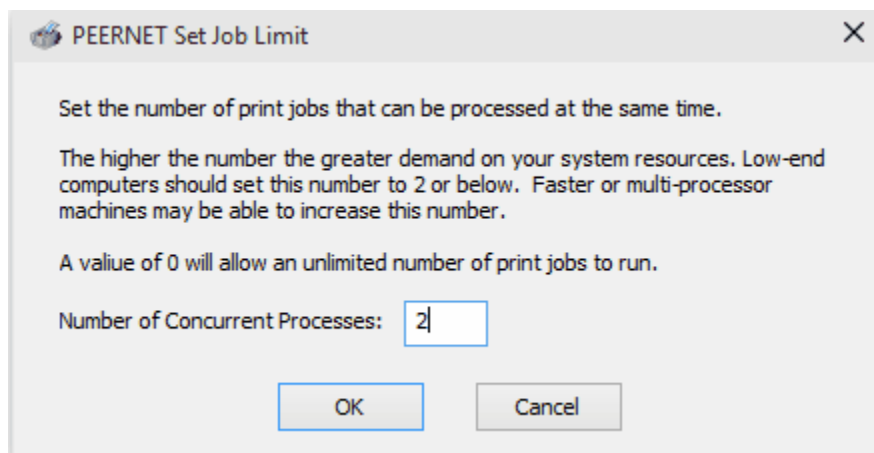
To set the number of jobs programmatically, you can call *PNSetMaxJobs11.exe* from the command line with the number to set, as shown below:

C:\Program Files\Raster Image Printer 11.0\Setups\PNSetMaxJobs11.exe 3

Using Run Commands to Call DLL Functions

The Run commands can be used to call DLL functions instead of running another program or batch file.

The DLL must expose the following three functions with the following prototypes:

```
PVOID APIENTRY Init_User_DLL ( void )
BOOL  APIENTRY TargetFunction ( PVOID pEnv, LPCSTR pszParams )
void  APIENTRY Terminate_User_DLL ( PVOID pEnv )
```

Init_User_DLL

The first time the driver loads a user DLL, it looks for a function named *Init_User_DLL*.

The purpose of this function is to allocate a runtime environment for your DLL. The driver passes the pointer that you return from Init_User_DLL to all subsequent function calls within the same DLL.

Terminate_User_DLL

When the driver unloads the DLL at the end of a print job, it looks for a function named *Terminate_User_DLL*.

The purpose of this function is to free any resources allocated with *Init_User_DLL*.

TargetFunction

Replace *TargetFunction* with the name you wish to use for your DLL function. The parameter list is passed to the target function as a single, command-line-style string (in accordance with the prototype).

Unlike the other run commands, the *End of Job* run command executes even if a job has been canceled (thereby giving you the opportunity to free resources). The $(JobStatus) variable is set to 0 if a job has been cancelled, otherwise it is 1.

> ⚠ **On 64-bit Operating Systems**
> On 64-bit operating systems, a 32-bit DLL is still needed when calling a DLL from the Run commands.

Example: Calling A DLL Function from End of Job

Use the following fields on the Run tab to call a function in a DLL:

Field	Argument
Command:	<Path to DLL> Use angle brackets around the path to designate that this is a DLL.
Parameters:	Parameters
Start in:	Name of function in the DLL to call

The following sample shows how you can configure the End of Job run command to call a function in a

DLL.

In this sample the DLL is named *FTPUpload.dll* and the function to upload the file is called *UploadFile*. The function takes the full path to the file as a single argument,
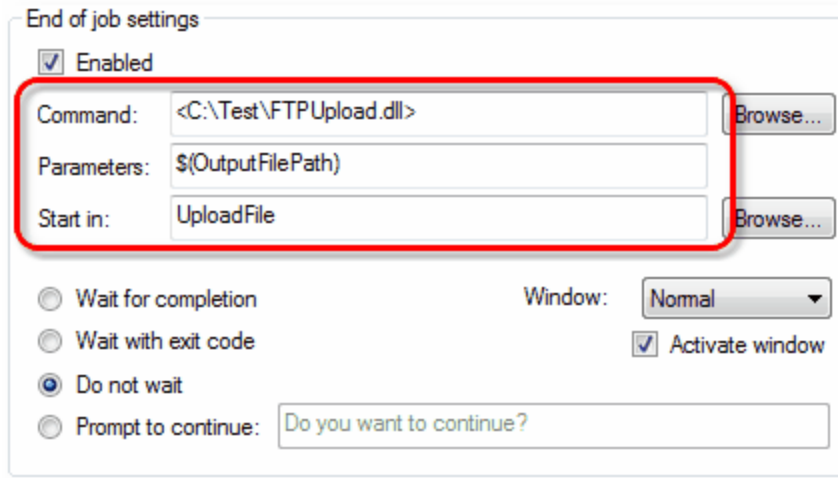
See Also:

For more details on how run commands can be used to call your own DLL functions see the Raster Image Printer Support and Documentation page.

Signaling Events Using Run Commands

Each of the run commands can be used to identify events for the driver to signal. This is useful for signaling to your application that a critical point in the printing process has been reached (for example, a page has been written, an output file has been released by the driver, or the print job has completed). See the Run tab for more information about the individual run events.

The driver only opens and signals the events. It is your responsibility to create and block on the events in your own code.

Use the following field on the Run tab to configure a run command to signal an event.

Field	Argument
Command:	{EventName} Use *curly braces* around the event name to designate to the driver that this is an event name. You **do not** need to specify the curly braces when creating and using the event name in your code.

Example: Using End of Job to Signal an Event

The following sample shows how you can configure the End of Job run command to signal an event that you could then wait for in your code.

Run Command Settings for End of Job:
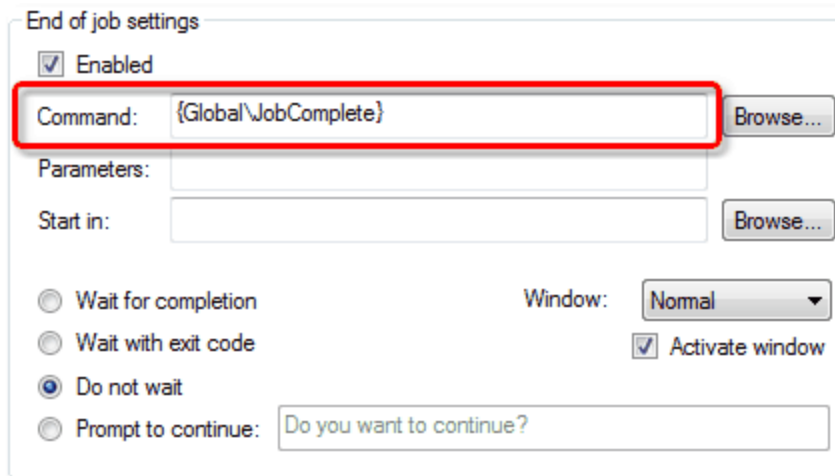
Sample C++ Code:

Below is a C++ code snippet showing the creation of the event and how to wait for the driver to signal the event before continuing the processing of the file.

```cpp
    DWORD dwWait = WAIT_TIMEOUT;

    // Create the event
    m_hEvent = ::CreateEvent( NULL, FALSE, FALSE, _T("Global\
\JobComplete") );
    if ( m_hEvent == NULL ) {
        ::AfxMessageBox( _T("Failed to create the event") );
        return ;
    }

    // do some other coding here, such as printing the document

    // wait for event, 2 min
    dwWait = ::WaitForSingleObject( this->m_hEvent, 120000 );

    if ( WAIT_OBJECT_0 == dwWait ) {
        ::AfxMessageBox( _T("Success on event signal") );

        // do something with the complete file here such as
        // uploading to an FTP site or an in-house archive system

    }
    else if ( WAIT_TIMEOUT == dwWait ){
        ::AfxMessageBox( _T("TIMEOUT on event signal") );
    }
    else {
```

```
        ::AfxMessageBox( _T("FAIL on event signal") );
    }
```

Printing From the Command Line

The following table lists the command-line parameters for printing to the Raster Image Printer from various commonly used applications.

> 💡 **Command Line Printing**
> When printing through the command line, please note that not all applications will close after printing the requested file.

File Type	Command Line
PDF file	AcroRd32.exe /t filename printer name [driver name] [port] (if using Acrobat Writer, substitute Acrobat.exe for AcroRd32.exe)
Notepad file	notepad.exe /p filename.TXT
TIFF Images	\WINDOWS\kodakprv.exe /p filename
DCX Images	\WINDOWS\kodakprv.exe /p filename
AWD fax documents	\WINDOWS\kodakprv.exe /p filename
DrWatsons Log	\WINDOWS\DRWATSON.EXE /P logfilename
Printing a font file	\WINDOWS\fontview.exe /p fontfile
Winfax faxes	\WINFAX\WFVW32.EXE -p filename
Internet URL shortcuts	rundll32.exe \WINDOWS\SYSTEM\MSHTML.DLL,PrintHTML filename.URL
Microsoft Excel	\OFFICE\excel.exe /e filename.XLS
Microsoft HTML document	\OFFICE\msohtmed.exe" /p filename.HTM
Microsoft BINDER file	\OFFICE\binder.exe -p filename.OBD
Microsoft PowerPoint file	\Office\PowerPnt.exe" /p filename.PPT
Microsoft Publisher	\OFFICE\MSPUB.EXE /p filename.PUB
Microsoft Word Docs	\Office\winword.exe" /x filename.DOC
Microsoft Info	\MSINFO\MSINFO32.EXE /p filename.NFO
MS Outlook files	\Office\outlook.exe /p filename.MSG
Pagemaker files	\PM6\PM6.EXE filename.PM6
Webshots Screensaver	\WSST.EXE /p filename.wss
WIF images	\WINDOWS\kodakprv.exe /p filename.WIF
Write documents	WORDPAD.EXE /p filename.WRI
XIF documents	\WINDOWS\kodakprv.exe /p filename.XIF

Retrieving Print Job Information

You can retrieve state information about print-job-specific variables at runtime by using the *$(variable)* syntax. These macros can be used to specify arguments to commands and DLL function calls through the job events (Start of Page, Each Page, File Close, End of Job) on the Run tab.

Raster Image Printer will perform instant macro expansion of all parameters and control string values in the $(variable) format. Because the state of these variables may change from page to page during a print job, you may want to instruct Raster Image Printer to perform *deferred macro expansion* instead.

Deferred macro expansion waits until the event happens to fill in the appropriate data. Use an extra dollar sign for this purpose, that is, use *$$(variable)* rather than *$(variable)*.

The macro values of the following variables can be retrieved at runtime:

Output Variables

Macro Name	Runtime Value
$(OutputDir)	Output directory
$(OutputDirNoQuotes)	Same as $(OutputDir) without quotation marks
$(OutputFileName)	Base output filename (before formatting)
$(OutputFileNameNoQuotes)	Same as $(OutputFileName) without quotation marks
$(CustomFileName)	Formatted output filename
$(CustomFileNameNoQuotes)	Same as $(CustomFileName) without quotation marks
$(OutputFilePath)	Final output file path
$(OutputFilePathNoQuotes)	Same as $(OutputFilePath) without quotation marks
$(FileExtension)	Output file extension
$(FileNumber)	Current file number
$(FilePageNumber)	Current page number in output file
$(JobPageNumber)	Current page number of the job
$(DocumentPageNumber)	Current document page number
$(OutputFormat)	0 (Serialized) or 1 (Multi-page)
$(JobID)	Current job ID maintained by the driver, this number is unique
$(PrintJobID)	The job ID from the print queue; this job id increments 0-256, then starts again at 0. It is not unique.

Page Variables

Macro Name	Runtime Value
$(PageOrientation)	"Portrait" or "Landscape"
$(PageWidth)	Page width in pixels
$(PageHeight)	Page height in pixels
$(PageXDPI)	Page X DPI (pixels per inch)
$(PageYDPI)	Page Y DPI (pixels per inch)
$(PageSkipped)	1 indicates page was skipped, 0 means page was not skipped
$(PageBitsPerPixel)	The bits per pixel for the page
$(ImageWidth)	Width of the image in pixels
$(ImageHeight)	Height of the image in pixels
$(ImageOrientation)	Orientation of the page, either Portrait or Landscape
$(ImageRotationInDegrees)	Rotation of the image, 0, 90, 180, or 270
$(ImageXDPI)	Image X DPI (pixels per inch)
$(ImageYDPI)	ImageY DPI (pixels per inch)

Date and Time Variables

Macro Name	Runtime Value
$(Year)	Year job was started
$(Month)	Month job was started
$(Day)	Day job was started
$(Hour)	Hour job was started
$(Minute)	Minute job was started
$(Second)	Second job was started

Other Variables

Other Variables	Runtime Value
$(UserName)	Name of user that submitted job

Other Variables	Runtime Value
$(MachineName)	Name of computer that submitted job
$(PrinterName)	Name of printer that submitted job
$(IPAddress)	IP Address of computer that submitted job
$(JobStatus)	1 indicates success, 0 indicates failure
$(Copies)	The number of copies chosen in the print dialog. This number is not used, just passed on as information.
$(Collate)	0 if collate was not checked, 1 if it was checked
$(Duplex)	1 = No duplex 2 = flip page on long edge 3 = flip page on short edge
$(FormName)	Paper form used (i,e. Letter, Legal, A4, etc.)
$(Color)	1 = Black and White, 2 = Color
$(Var0) - $(Var9)	In addition to the predefined variables listed above, ten variables (Var0 - Var9) are made available to you for personal use during print jobs. You can use the printer script file or control strings to assign values to these variables (see the "Using Control Strings" and "Automating the Printing Process" sections of this document for more information).

Retrieving Environment Settings

If you need to retrieve information at runtime that is not provided by the Print Job Information macros, you can use the $[registry key] syntax to store and retrieve environment settings from the registry at runtime.

Raster Image Printer will perform instant macro expansion of all values in the $[registry key] format. These may be run command parameters, save directories and filenames, and control string values.

Because registry data may change during a print job, you may want to instruct Raster Image Printer to defer macro expansion when using control strings. Use an extra dollar sign for this purpose, that is, use $$[registry key] rather than $[registry key].

The complete path to a valid registry key value must appear in the string. For example:

```
$[HKEY_LOCAL_MACHINE/Config/0001/Display/Settings/Resolution]
```

Retrieving Print Job Information

Deprecated Features

The following features are being deprecated. They are currently available for use for backwards compatibility for clients upgrading from previous versions of the driver.

Using Control Strings

> **Warning**
> The following features have been deprecated. No new functionality will be added to these features.

Control strings can be used to manipulate Raster Image Printer settings dynamically during print jobs. Control strings embedded in your documents override settings in the printer property sheets, and remain in effect for the duration of the print job. Control strings use the following syntax (braces {} denote optional arguments):

~0% keyword "value" { keyword "value" { keyword "value" { ... } ?

Control strings must conform to the following criteria in order to be processed by Raster Image Printer:

- Control strings must contain at least one keyword-value pair.

- No spaces should separate the first three characters (~0%).

- The final character must be a question mark (?).

- Control strings must appear at the very beginning of a line.

- No other text should appear on lines that hold control strings.

- Values are enclosed in quotation marks ("); when using control strings Microsoft Word you will need to turn off *Smart Quotes*. Control strings formatted with *Smart Quotes* will not be recognized by the driver.

> **Enabling Control Strings**
> In Raster Image Printer 11.0, unlike earlier versions of the driver, control string support is disabled unless explicitly turned on through the *Enable Control Strings* check box on the Text Extraction dialog box.

Control strings are processed internally. They will not be printed to the output unless they are improperly formatted, and thus indistinguishable from regular text. If your control strings appear in the output, it is a clear sign that one of the criteria above has not been met.

If your control strings fail to have the desired effect, yet do not appear in the output, make sure that the keywords they reference are recognized by Raster Image Printer.

Changing the control string prefix and suffix

By default the prefix of **'~0%**' and suffix of '**?**' are used to recognize a control string pattern in a printed document. Some applications will break this string and print each character separately, making it impossible for us to detect the control string. From the Text Extraction tab you can set the control string prefix and suffix to a single Unicode character value. By using this feature, products like Crystal Reports and Adobe Reader can be configured so the product recognizes control strings.

Control Strings Keywords

The tables in the next sections list the keywords can be set through control strings. A value in **bold** text represents the default value for that keyword.

- ➤ [Save Keywords](#)
- ➤ [Compression Keywords](#)
- ➤ [FAX/TIFF Keywords](#)
- ➤ [PDF Security Keywords](#)
- ➤ [Advanced File Naming Keywords](#)
- ➤ [Watermark Keywords](#)
- ➤ [Run Keywords](#)
- ➤ [Error Reporting Keywords](#)
- ➤ [User Variables and Other Keywords](#)

Save Keywords

Save Keywords	Accepted Values
OutputDir	Full path to a directory
OutputFilename	A valid filename excluding path and extension
OutputFormat	*Included for backwards support for older TIFF and PDF Image Printer drivers, use **OutputFileFormat** (see below) instead.* **Multipage** Serialized
OutputFileFormat	JPEG TIFF Multipaged TIFF Serialized Adobe PDF Multipaged Adobe PDF Serialized CompuServe GIF CompuServe PNG Windows BMP TARGA Adobe Photoshop 3.0 ZSoft PCX ZSoft DCX
ColorReduction	none = No color reduction **optimal = Reduce to optimal palette** grey = Reduce to greyscale palette BW = Reduce to black and white 256Colors = Reduce all pages to 256 colors 16Colors = Reduce all pages to 16 colors optimalMax256Colors = Reduce to optimal palette, maximum number of colors per page is 256 optimalMax16Colors = Reduce to optimal palette, maximum number of colors per page is 16
NewFile	No argument required. Creates a new file starting with the *current* page.
Append	**0 = Create a new file (see [Append Mode](#) for more information)** 1 = Append to existing file or sequence of files on disk
Overwrite	**0 = Prompt before overwriting files** 1 = Overwrite existing files without prompting
Prompt	Deprecated; this control string is not longer supported. Prompting can only be controlled through the driver preferences, the script file or by using the PNSrv11 COM Object.
SkipPage	None required; skips the current page.
SkipOn	0 = Stop skipping pages (resume) 1 = Start skipping pages (exclude from output)
UseJobID	**0 = Do not include JobID in filename** 1 = Include JobID in filename

Deprecated Features

Save Keywords	Accepted Values
RemoveProductName	0 = Leave product name in filename **1 = Remove product name from filename**
DeleteFiles	**0 = Do not delete output files at end of job** 1 = Delete all output files at end of job
TempDir	Full path to a directory to use as the temporary folder
FileNumber	A positive integer between 0 and 65535, used to start a serialized naming sequence
PrintRange	Comma and dash delimited list of pages and ranges to print (e.g. 3,6-9,12-15,25)
RotateLandscape	**0**, 90, 180, or 270 (degrees counter-clockwise)
RotatePortrait	**0**, 90, 180, or 270 (degrees counter-clockwise)

> **Append Mode**
> Until a new filename or directory is specified, pages will continue to be written to the same file even after append mode is turned off.

Compression Keywords

JPEG Compression Keywords	Accepted Values
JPEGColorCompression	High Quality **Medium Quality** Low Quality
JPEGGreyscaleCompression	High Quality **Medium Quality** Low Quality

TIFF Compression Keywords	Accepted Values
TIFFColorCompression	Uncompressed RGB Uncompressed CMYK **LZW RGB** LZW CMYK High quality JPEG Medium quality JPEG Low quality JPEG Packbits RGB Packbits CMYK
TIFFIndexedCompression	Uncompressed **LZW** High quality JPEG Medium quality JPEG Low quality JPEG Packbits
TIFFGreyscaleCompression	Uncompressed **LZW** High quality JPEG Medium quality JPEG Low quality JPEG Packbits
TIFFBWCompression	Uncompressed **Group4** Group3-2D Group3-1D MH LZW Packbits

PDF File Compression Keywords	Accepted Values
PDFUseCompression	0 = Do not compress the file **1 = Enable file compression**
PDFUseASCII	**0 = No ASCII format compression** 1 = Use ASCII format compression

Deprecated Features

PDF File Compression Keywords	Accepted Values
PDFContentEncoding	None Zip RLE **LZW**
PDFColorCompression	None Zip RLE **LZW** JPEG Low JPEG Medium JPEG High
PDFGrayscaleCompression	None Zip RLE **LZW** JPEG Low JPEG Medium JPEG High
PDFIndexedCompression	None Zip RLE **LZW** JPEG Low JPEG Medium JPEG High
PDFBWCompression	None CCITT Group 3 1D CCITT Group 3 2D **CCITT Group 4**

FAX/TIFF Keywords

FAX/TIFF Keywords	Accepted Values
FaxMode	**0** = Disable fax mode 1 = Enable fax mode
FillOrder	LSB2MSB **MSB2LSB**
FillBits	0 = EOLs not byte aligned (no fillbits) **1 = EOLs byte aligned (use fillbits)**
Photometric	**MinIsWhite** MinIsBlack
DateTime	0 = Do not write date/time tag to TIFF file **1 = Write date/time tag to TIFF file**
Motorola	**0 = Save TIFF files in Intel format** 1 = Save TIFF files in Motorola format

Deprecated Features

PDF Security Keywords

PDF Security Keywords	Accepted Values
PDFUseSecurity	0 = Create unsecured PDF File **1 = Create secure PDF file**
PDFEncryptLevel	**40 bit = Use 40-bit encryption** 128 bit = Use 128-bit encryption
PDFCanChangeDoc	**0 = Do not allow users to change the document** 1 = Allow users to change the document
PDFCanChangeOther	**0 = Do not allow users to add or change comments and form fields** 1 = Allow users to add or change comments and form fields
PDFCanCopy	**0 =Do not allow users to copy text and graphics** 1 = Allow users to copy text and graphics
PDFCanPrint	0 = Do not allow users to print the document **1 = Allow users to print the document**
PDFOwnerPswdOn	**0 =No owner password required to change document** 1 = Owner password required to change document
PDFOwnerPswd	Text string up to 32 characters in length
PDFUserPswdOn	**0 =No user password required to open document** 1 = User password required to open document
PDFUserPswd	Text string up to 32 characters in length

Advanced File Naming Keywords

Advanced File Naming Keywords	Accepted Values
Profile_S_Format	Format string for the Serialized profile
Profile_S_Extension	0 = Do not use default extension in the Serialized profile **1 = Use default extension in the Serialized profile**
Profile_S_Variable	List of driver variables used to build the filename **(see Variable Names below for more information)**
Profile_SJ_Format	Format string for the Serialized with JobID profile
Profile_SJ_Extension	0 = Do not use default extension in the Serialized with JobID profile **1 = Use default extension in the Serialized with JobID profile**
Profile_SJ_Variable	List of driver variables used to build the filename **(see Variable Names below for more information)**
Profile_M_Format	Format string for the Multi-page profile
Profile_M_Extension	0 = Do not use default extension in the Multi-page profile **1 = Use default extension in the Multi-page profile**
Profile_M_Variable	List of driver variables used to build the filename **(see Variable Names below for more information)**
Profile_MJ_Format	Format string for the Multi-page with JobID profile
Profile_MJ_Extension	0 = Do not use default extension in the Multi-page with JobID profile 1 = Use default extension in the Multi-page with JobID profile
Profile_MJ_Variable	List of driver variables used to build the filename **(see Variable Names below for more information)**

Deprecated Features

> **Variable Names**
>
> Use n=VariableName where **n** is the position of **VariableName** within the format string, and **VariableName** is one of the following:
>
> - OutputFileName
> - JobID
> - FileNumber
> - DocumentPageNumber
> - FilePageNumber
> - FileExtension
> - Year, Month, Day, Hour, Minute, Second
> - Var0 - Var9.
>
> You must emit a control string for each variable placeholder in the format string. For example, to set the serialized profile so that filenames are produced in the format MyFileName_FileNumber, emit the following control strings:
>
> ```
> ~0% Profile_S_Extension "0" ?
> ~0% Profile_S_Format "%s.%3d" ?
> ~0% Profile_S_Variable "1=OutputFileName" ?
> ~0% Profile_S_Variable "2=FileNumber" ?
> ```

Watermark Keywords

Watermark Keywords	Accepted Values
WatermarkEnable	**0 = Disable** 1 = Enable
WatermarkFirstPageOnly	0 = Watermark every page **1 = Watermark first page only**
WatermarkPortImg	Path to watermark image for portrait pages
WatermarkPortPos	**Stretch = Stretch to fit** Tile = Tile Center = Center
WatermarkPortBright	-100 to -1 - darkens the image **0** - no change 1 to 100 - lightens the image
WatermarkLandImg	Path to watermark image for landscape pages
WatermarkLandPos	**Stretch = Stretch to fit** Tile = Tile Center = Center
WatermarkLandBright	-100 to -1 - darkens the image **0** - no change 1 to 100 - lightens the image

Run Keywords

> 💡 **Run Command**
>
> If the Run command is disabled, the corresponding RunAtStartEnable, RunAtPageEnable, RunAtFileEnable, or RunAtEndEnable flag must be set to "1" in a control string in order for the application to run as scheduled. The application can be temporarily disabled by setting the flag to "0".
>
> Because some applications interpret backslashes (\ ) as line separators, use forward slashes (/) rather than backslashes to designate paths and other values in your control strings to ensure they work properly.

Run Keywords	Accepted Values
RunAtStartEnable	**0 = Disable** 1 = Enable
RunAtStartCommand	Full path to an executable (see Run Command for more information)
RunAtStartParams	Any parameters needed for the command
RunAtStartDir	Full path to a working directory
RunAtStartWndActivate	0 = Do not activate window **1 = Activate window**
RunAtStartWndState	Window state: **Normal**, Minimized, Maximized, or Hidden
RunAtStartWait	0 = Wait for completion 1 = Wait with exit code **2 = Do not wait** 3 = Prompt to continue
RunAtStartPrompt	A string to be used as the prompt if *RunAtStartWait* is *3*. The default prompt is "Do you want to continue?".
RunAtPageEnable	**0 = Disable** 1 = Enable
RunAtPageCommand	Full path to an executable (see Run Command for more information)
RunAtPageParams	Any parameters needed for the command
RunAtPageDir	Full path to a working directory
RunAtPageWndActivate	0 = Do not activate window **1 = Activate window**
RunAtPageWndState	Window state: **Normal**, Minimized, Maximized, or Hidden
RunAtPageWait	0 = Wait for completion 1 = Wait with exit code **2 = Do not wait** 3 = Prompt to continue
RunAtPagePrompt	A string to be used as the prompt if *RunAtPageWait* is *3*. The default prompt is "Do you want to continue?".

Run Keywords	Accepted Values
RunAtFileEnable	**0 = Disable** 1 = Enable
RunAtFileCommand	Full path to an executable (see Run Command for more information)
RunAtFileParams	Any parameters needed for the command
RunAtFileDir	Full path to a working directory
RunAtFileWndActivate	0 = Do not activate window **1 = Activate window**
RunAtFileWndState	Window state: **Normal**, Minimized, Maximized, or Hidden
RunAtFileWait	0 = Wait for completion 1 = Wait with exit code **2 = Do not wait** 3 = Prompt to continue
RunAtFilePrompt	A string to be used as the prompt if *RunAtFileWait* is *3*. The default prompt is "Do you want to continue?".
RunAtEndEnable	**0 = Disable** 1 = Enable
RunAtEndCommand	Full path to an executable (see Run Command for more information)
RunAtEndParams	Any parameters needed for the command
RunAtEndDir	Full path to a working directory
RunAtEndWndActivate	0 = Do not activate window **1 = Activate window**
RunAtEndWndState	Window state: **Normal**, Minimized, Maximized, or Hidden
RunAtEndWait	0 = Wait for completion 1 = Wait with exit code **2 = Do not wait** 3 = Prompt to continue
RunAtEndPrompt	A string to be used as the prompt if *RunAtEndWait* is *3*. The default prompt is "Do you want to continue?".

Error Reporting Keywords

Error Reporting Keywords	Accepted Values
LogEnable	**0 = Disable** 1 = Enable
LogFile	Full path to a file to be used as the log file (default is %TEMP%\PNRAS11.log)
MessageBoxStyle	None Timed **Standard**

User Variables and Other Keywords

Keywords	Accepted Values
CancelJob	1 = cancel the job
Var0 - Var9	string or number to set into the user variable

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